BOTSWANA POPULATION & HOUSING CENSUS 2022:
ANALYTICAL REPORT

VOLUME 3

GENDER, DISABILITY, NUPTIALITY, MIGRATION, AND URBANIZATION

STATISTICS BOTSWANA

UNFPA

Republic of Botswana

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Mpala, Ke Botlhokwa

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Demographic and Socio-Economic Indicators	2022	2011
Total Population	**2,359,609**	**2,024,904**
Number of households	**684,844**	**550,926**
Average household size	3.3	3.7
Average size of male-headed households	3.0	3.4
Average size of female-headed households	3.7	4.0
Population Density	4.1	3.5
The median age for first marriage(Years)	29.0	
Child marriages (Percentage)	1.6	
Women aged 20-24 who were married or in union before age 18 (Percentage)	2.6	

PREFACE

The 2022 Population and Housing Census (PHC) represents a significant milestone in the conduct of Botswana's decennial Population and Housing Censuses. Its undertaking provides a comprehensive snapshot of the nation's demographic, social, and economic landscape. The data collected through this census offers invaluable insights into the country's evolving population dynamics, household characteristics and socio-economic trends.

These thematic volume follows a series of reports earmarked as products of the 2022 Population and Housing Census. Due to the rich resource of the census data, there is need to further delve into deeper analysis. This report presents a detailed thematic analysis of the 2022 PHC data. The analysis presented in this report is based on rigorous data processing and statistical techniques. Every effort has been made to ensure the accuracy and reliability of the findings.

The analysis of the 2022 PHC has been organized into six thematic volumes:

- **Volume 1**: Demographic and Social Characteristics, Registration, Youth and Elderly, Education
- **Volume 2**: Household Characteristics, Economic Activity
- **Volume 3:** Gender, Disability, Nuptiality, Migration, and Urbanization
- **Volume 4:** Transport and ICT, Agriculture and Land Ownership
- **Volume 5:** Fertility, Mortality and Household Energy Use
- **Volume 6:** Employment (Occupation and Industry)

I express my sincere gratitude to the dedicated team of professionals/analysts who contributed to the successful implementation and analysis of the 2022 PHC. Their hard work and commitment have made this comprehensive analysis possible. Statistics Botswana also acknowledge the support of our development partners, particularly the United Nations Fund for Population Activities (UNFPA) and United Nations Development Programme (UNDP), whose technical assistance was instrumental in the conduct of the census. I trust that these thematic volumes report will serve as a valuable resource for understanding Botswana's demographic and socio-economic landscape.

Dr. Lucky Mokgatlhe
Acting Statistician General
May 2025

GENDER

GENDER EQUALITY; A CENSUS ANALYSIS OF HOW POLICIES AIMED AT PROMOTING GENDER EQUALITY HAVE AFFECTED THE POPULATION.

Shepherd Monyeki:
National Planning Commission (NPC)

EXECUTIVE SUMMARY

Gender equality has been one of the major public policy issues around the world, and Botswana in particular. The last three decades saw Botswana adopt and implement numerous gender equality oriented policies. This paper analyses the impact of gender equality-oriented policies on Botswana society. The paper uses the 2022 Population and Housing Census data, alongside the past censuses, national statistical reports, and existing literature. Employing descriptive statistics through SPSS, the analysis also focuses on individuals born between 1982 and 1988, who are the youngest beneficiaries of Botswana's first generation of gender equality policies, to understand the broader impact of these policies relative to the entire population. These policies are the 1994 Revised National Policy on Education, the 1995 Women and Development Policy, and the 1997 National Population Policy as well as their second generation policies.

Key findings indicate that Botswana's population is growing at a diminishing rate, with the gender ratio nearing equilibrium. However, the population distribution is in such that males dominate districts that are synonymous with key economic activities such as mining, tourism, and beef. Gender equality has generally improved, particularly within the targeted cohort compared to previous generations. However, the education sector shows signs of reverse gender inequality, and economic participation remains uneven, with females still underrepresented in certain fields.

In light of Botswana's aspiration to achieve high-income status by 2036 through its National Transformation Strategy, the paper underscores the need for research and policy dialogues to address the evolving implications of gender and population dynamics. The paper recommends a focus on enhancing population growth support, addressing emerging reverse inequalities, promoting female economic participation, strengthening gender and legal sensitisation efforts, and benchmarking against international best practices among others.

Overall, while Botswana has made substantial progress in gender equality, continued efforts are needed to address remaining and emerging challenges. By implementing targeted policies and fostering inclusive policy dialogues, Botswana can further advance towards its goal of prosperity for all.

INTRODUCTION

This paper analyses how gender equality-oriented policies have shaped the hitherto Botswana society's demographic, social, and economic status. The paper used the 2022 Population and Housing Census data, along with insights from past censuses, National Statistical reports and literature to assess how Botswana fairs on gender equality. Mainly employing descriptive statistics through SPSS, the paper also focused on a particular age group, being persons born between 1982 and 1988. The review comes at a time when Botswana has committed to the Sustainable Development Goals (SDG), and the African Agenda 2063 at both the global and regional levels, as well as the time when Botswana has embraced Vision 2036 together with its National Transformation Strategy (NTS). The latter is cognizant of the socioeconomic challenges faced by Botswana and offers some innovations to propel Botswana to the envisioned high-income status. Since most definitions of gender and gender equality are centred on equal access to opportunities as well as outcomes (Giddens 2009) (UNICEF 2017), this paper defines gender equality around the same.

For a background, year 1994 marked the adoption of the Revised National Policy on Education which allow girl-children opportunities to return to school after pregnancy, and progress in education. Also, 1995 marked the adoption of Botswana's first gender policy document (The Women in Development Policy), which espoused six (6) critical areas of concerns. Lastly, 1997 marked Botswana's adoption of the Population Policy to influence population growth and infuse population into national planning, including gender equality. In the same year, the National Policy on Vocational Education and Training was adopted to improve vocational and technical skills, including female's access. These policies which were virtually adopted and implemented during the life course of the cohort under discussion were also revised in 2010 and 2015 and are due for review. Therefore, this analysis would add to the review of these policies.

Objectives

The objectives of this paper are to;

a. **Assess the gender aspects of the population distribution, and their policy implications for gender and development.**
b. **Assess the extent of gender disparities relative to Botswana's development trajectory and demographic situation.**
c. **Propose recommendations for demographic and socioeconomic policy measures.**

LITERATURE REVIEW

This subject, including a focus on Botswana, has gained some significant interest among researchers over time across social sciences and humanities fields. The regular Statistics Botswana surveys, and Botswana's regular reporting to international bodies on instruments such as the United Nations' Sustainable Development Goals (SDGs), the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW), and Southern African Development Community (SADC)'s Gender and Development Protocol, provide some appraisals on how Botswana adapts and performs on gender equality. The World Economic Forum through its Global Gender Gap Report, and UNDP's Human Development Reports, UN's annual global SDG reports, and the World Bank, have developed various methodologies and instruments culminating in the development of periodic global and country-specific reports on gender equality. Their methodologies yield indicators that are comparable over time and space. A review of all these shows improvements in Botswana's adoption and implementation of gender equality oriented policy instruments.

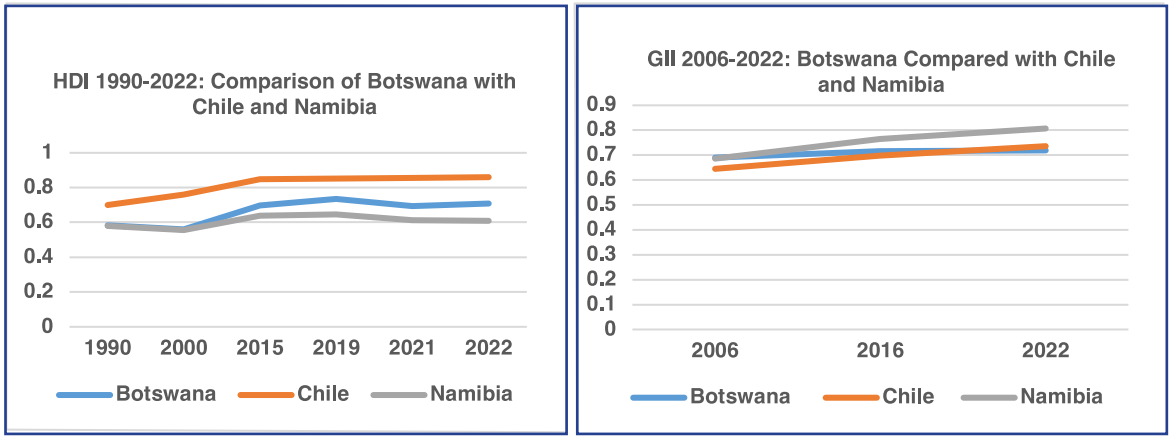
While gender inequality continues to plague public policy despite major advances in many economies (Reyes-Householder 2019), literature also shows global improvements on gender equality, especially among the middle to upper income countries. This include Botswana's gradual improvements despite struggles on some indicators, especially in politics. Moreover, with a highly youthful, and working-age population (Government of Botswana and UNFPA 2018), an economically unequal society (UNDP 2021) which experiences a high, yet fluctuating unemployment rates, (Statistics Botswana 2022), a

steadily ageing population (Bainame and Shaubu 2001), a diminishing population growth rate (Statistics Botswana 2022), and a GDP that has declined to an average of three (3%) per cent per year over the last decade (World Bank 2023), Botswana is a country at crossroads, yet poised to achieve prosperity for all and raise from the plague of gender inequality as well as progress to the high income status as stated in Vision 2036 and NTS, (NPC 2023).

Even though gender equality is a desired outcome in development literature, some scholars hold it responsible for some demographic challenges, especially slow population growth and family disintegration. According to Pampel, (2011), the progress made over past decades toward gender equality has affected most demographic processes, including fertility, childlessness, combining work and family responsibilities, job segregation, and family relationships. This observation point to an interplay between gender equality, demographic stability, and economic development. According to Shrestha (2021), countries with lesser gender disparity experience low population growth whereas those with higher gender disparity have high population growth. Botswana's improved Gender Inequality Index (GII) and a decline in population growth rate confirm this observation.

A comparison of Botswana to economies like Chile and Namibia on Human Development Reports (HDI) and GII shows some contrasting pictures **(Figure 1)** where Botswana is surpassed by Chile on HDI, and by Namibia on GII in the last three decades.

FIGURE 1 Botswana's HDI and GII; Comparison with other economies



Source UNDP (2024) and WEF (2006), WEF (2022)

Also, compared with labor force participation in the upper middle income countries, the gap between men and women is lower in Botswana (World Bank 2023). Whereas this gap has been reduced from 27.6 in 1995 to 25.1 in 2022 at the global level, within the middle income countries is decreased from 20.4 in 1995 to 17.5 and while in Botswana it declined from 24.7 in 1995 to 9.6 in 2022. This trend is confirmed by (Setlhare, et al. 2019) and (Maika and Mbatkam 2019) who also observed disparities in earnings between males and females.

In conclusion, gender equality or gender inequality is a widely researched subject having gained interest among scholars, international organizations and governments. Research has shown some improvements on gender equality over time and space, and associate gender equality to population dynamics such as declined fertility rate and population growth rate.

METHODOLOGY

Data for this paper was obtained from Statistics Botswana in SPSS formats. It was then analysed using descriptive statistics method, then later summarised into graphs and tables. The paper uses sex, age, and district as independent variables while education, and economic activities are dependent variables. For the cohort, the study included person who were aged 34 to 40 by year 2022, and tracked the same cohort from the 2001 census period.

DATA ANALYSIS

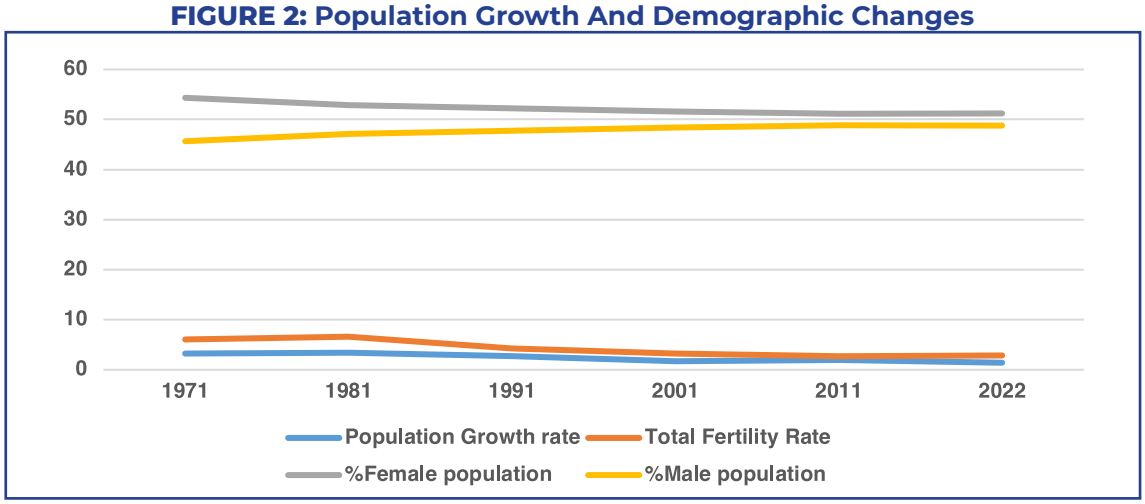
Since the study focuses on gender equality, there is a special focus on specific cohort, which is used as proxy of the first children-population that benefited from the first generation of gender equality orient policies, especially the 1995's Women in Development Policy, and the 1994's Revised National Policy on Education. The cohort include person aged 34 to 40 and above by 2022, and tracks the same cohort from 2001 census period.

FINDINGS AND DISCUSSIONS

Botswana's population grows at a diminishing rate accompanied by a shrinking percentage difference between males and females and characterized by a constantly declining fertility rate. Males are more populate in districts synonymous with mining, beef and tourism. Also, females still participate less in certain fields traditionally dominated by males and are concentrated in roles they traditionally play. Parity is over achieved in education, but unemployment is still predominantly experienced by females. Botswana population growth, distribution and gender.

Figure 2 shows a constantly shrinking percentage difference between male and female populations, a declining population growth rate, and a declining fertility rate between 1971 and 2022.

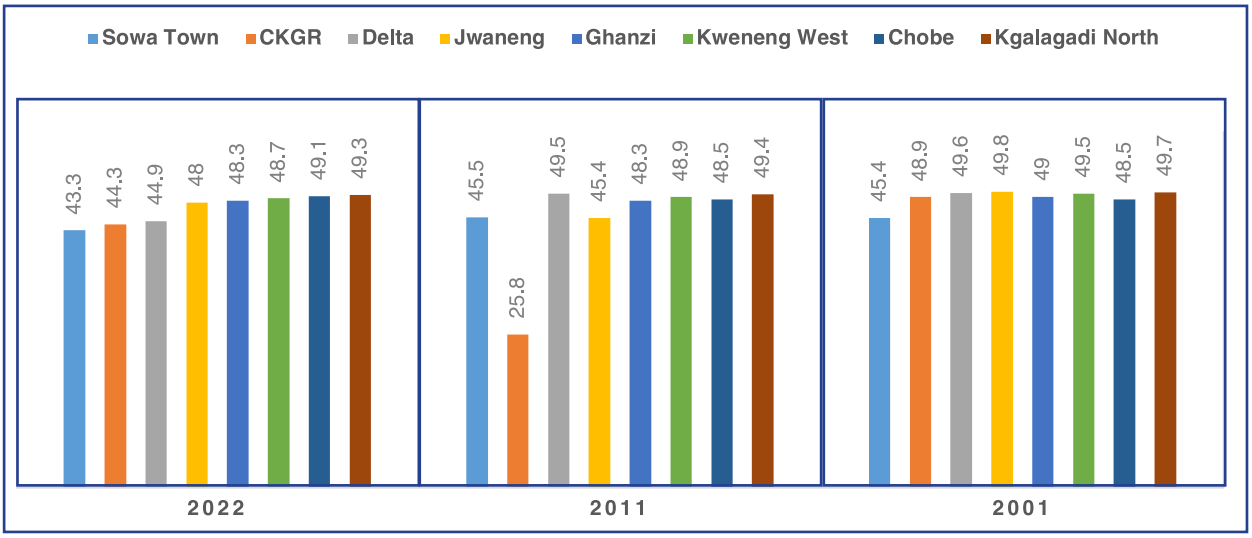
FIGURE 2: Population Growth And Demographic Changes



POPULATION DISTRIBUTION BY SEX, COHORT AND DISTRICT

Figure 3 shows that eight out of 28 districts where female population is constantly less than males in the last three decades. These include two mining towns, major tourism districts and districts synonymous with cattle farming.

FIGURE 3 Population Distribution and Gender



A constant percentage female decrease is observed in Kgalagadi North, Kweneng West, and Okavango Delta. Sowa town's female population accounts for about 44 percent in the last three decades.

Table 1 shows that the highest percentage population distribution of this cohort fluctuates between Gaborone and Kweneng East, with Serowe-Palapye constantly decreasing over the census periods. While the percentage cohort population remains constant in Orapa at 0.5 in all the census periods, with an increasing percentage females over the census periods, a percentage increase in the cohort is observed in four districts. These are Ghanzi (1.7%, 2% and 2.3%), Kweneng East (11.7%, 14%, and 14.9%), Ngamiland East (4.5%, 4.8% and 5.4%), and South East (3.5%, 4.8% and 5%). In all these, the female population is higher than males except at Ghanzi in 2011(47.4%), and 2022 (46.8%), and Ngamiland East in 2022 (49.1%).

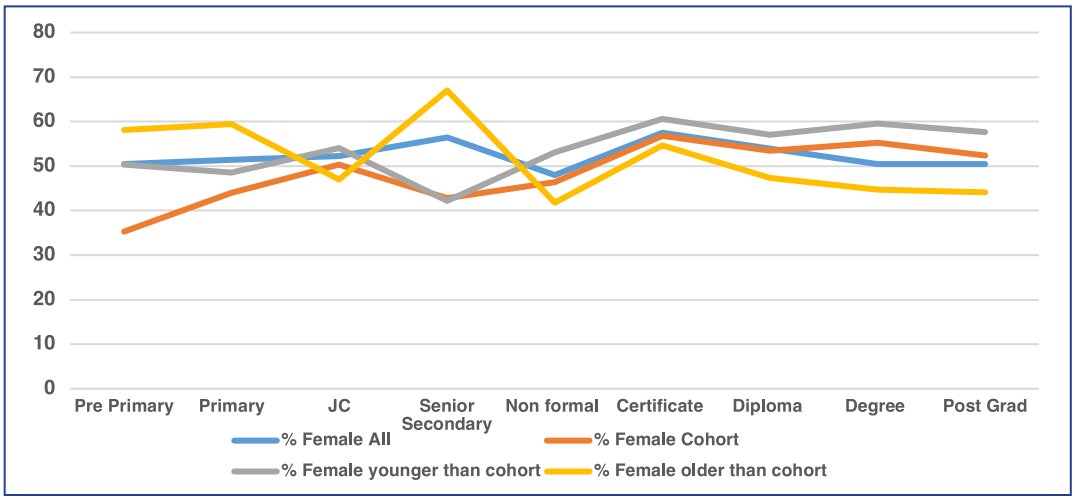
TABLE 1: Percentage distribution of cohort by district, sex and year; 2001,2011 and 2022 Census

DISTRICT	2001			2011			2022		
	TOTAL COHORT	% FEMALE	%COHORT	TOTAL NUMBER COHORT	% FEMALE	% COHORT	TOTAL NUMBER COHORT	% FEMALE	% COHORT
Gaborone	**26, 507**	55.6	9.3	**45, 437**	51.2	15.8	**33, 273**	52.1	12.5
Francistown	**13, 236**	55.7	4.6	**18, 719**	52.8	6.5	**13, 751**	52.9	5.2
Lobatse	**4, 568**	55.6	1.6	**4, 646**	52.3	1.6	**3, 785**	52.3	1.4
Selebi_Phikwe	**7, 842**	57.9	2.7	**8, 396**	51.3	2.9	**5, 135**	56.3	1.9
Orapa	**1, 319**	55.5	0.5	**1, 533**	56.9	0.5	**1, 355**	60.0	0.5
Jwaneng	**2, 309**	57.2	0.8	**3, 561**	45.5	1.2	**3, 237**	44.8	1.2
Sowa Town	**404**	55.0	0.1	**519**	50.3	0.2	**474**	40.3	0.2
Southern	**20, 879**	49.0	7.3	**14, 263**	52.0	5.0	**13, 768**	50	5.2
Barolong	**8, 517**	47.1	3.0	**5, 350**	52.4	1.9	**5, 411**	50.1	2.0
Ngwaketse West	**1, 740**	50	0.6	**1, 587**	47.4	0.6	**2, 388**	48.7	0.9
South East	**9, 719**	51.2	3.4	**13, 921**	52.1	4.8	**13, 342**	51.6	5.0
Kweneng East	**33, 239**	51.5	11.7	**40, 262**	51.7	14.0	**39, 547**	50.5	14.9
Kweneng West	**7,127**	47.2	2.5	**5, 904**	46.8	2.1	**6, 068**	45.1	2.3
Kgatleng	**12162**	49.4	4.3	**11, 642**	52.0	4.1	**13, 710**	50.2	5.2
Central Serowe Palapye	**27, 022**	49.7	9.5	**22, 177**	49.6	7.7	**20, 676**	50.8	7.8
Central Mahalapye	**19, 258**	48.9	6.8	**13, 131**	52.0	4.6	**12, 674**	50.8	4.8
Central Bobonong	**12, 233**	47.6	4.3	**7, 713**	51.4	2.7	**7, 272**	52.9	2.7
Central Boteti	**8, 419**	49.2	3.0	**7, 464**	51.4	2.6	**8, 705**	48.7	3.3
Central Tutume	**22, 803**	48.6	8.0	**16, 427**	52.1	5.7	**15, 424**	51.2	5.8
North East	**9, 348**	48.3	3.3	**6, 719**	52.9	2.3	**6, 810**	52.6	2.6
Ngamiland East	**12, 831**	51.7%	4.5	**1, 3691**	51.6	4.8	**14, 393**	49.1	5.4
Ngamiland West	**9, 009**	51.5%	3.2	**7, 110**	55.2	2.5	**7, 185**	53.6	2.7
Chobe	**2,710**	51.5%	0.9	**4, 192**	47.2	1.5	**4, 016**	48.7	1.5
Okavango Delta	**291**	56.7	0.9	**617**	48.0	0.2	**602**	42.2	0.2
Ghanzi	**4, 951**	50.2	1.7	**5, 856**	47.4	2.0	**6, 206**	46.8	2.3
Central Kgalagadi Game Reserve (CKGR)	**98**	36.7	0.00	**70**	21.4	0.0	**61**	29.5	0.00
Kgalagadi South	**4, 111**	50.1	1.4	**3, 733**	51.6	1.3	**3, 562**	51.0	1.3
Kgalagadi North	**2, 624**	48.6	0.9	**2, 623**	48.7	0.9	**2, 740**	48.1	1.0
All	**28,5276**	**50.9**	**100**	**287, 263**	**51.3**	**100.0**	**265, 570**	**50.8%**	**100**

EDUCATION, TRAINING AND GENDER EQUALITY

Figure 4 and **Table 2** show that females are disproportionally represented at the post-secondary education level. However, within the younger cohort, females account for 61%,57%,60% and 58% of certificate, diploma, degree and postgraduate holders respectively.

FIGURE 4 Percentage Population 's highest education level: Cohort compared with populations younger and older



About 30 percent of females compared to males within the cohort has pre-primary education as their highest level of education in 2022 while females older and younger than the cohort account for over 50 percent of the same.

ECONOMIC PARTICIPATION OF THE FEMALES

Figure 5 shows that females account for less than 50 percent of the unemployed population compared to males who are actively seeking employment across all cohorts. However, higher percentage of females account for the population doing housework across age groups. Similarly, a high percentage of females in internship or Tirelo Sechaba (78.6%), and a low percentage in apprentice (33.2%) is observed among the employed (figure 6). Also, a lower percentage of females in self-employment with employees (29.5%) and higher percentage of their membership to Producer Corporative (53.8%) is observed.

FIGURE 5 Percentage unemployed females by cohort and economic activity

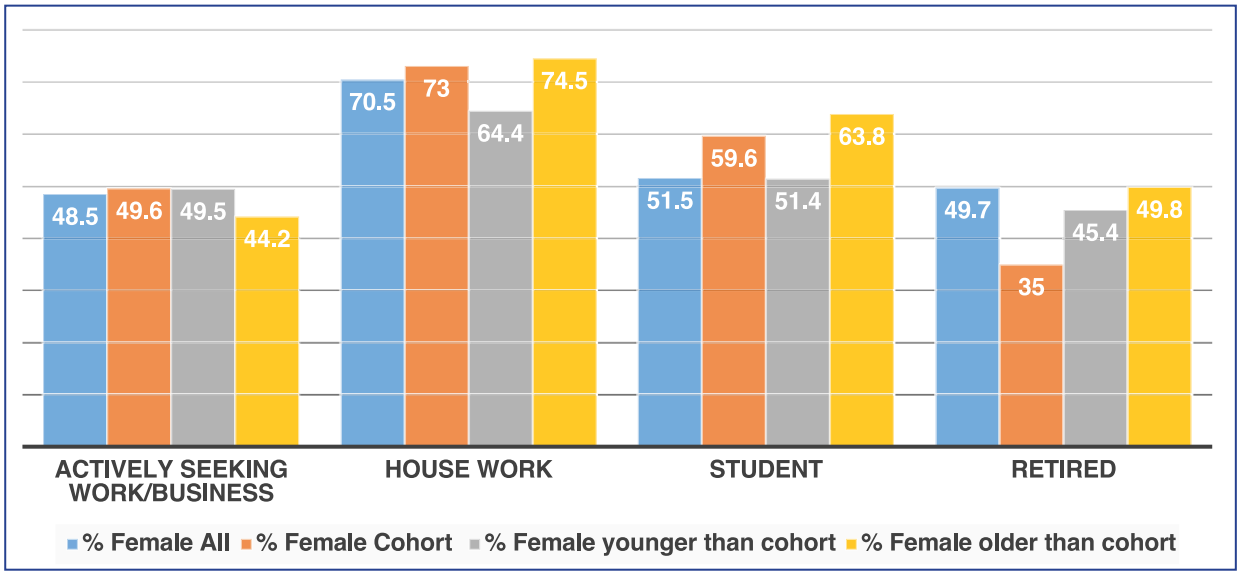
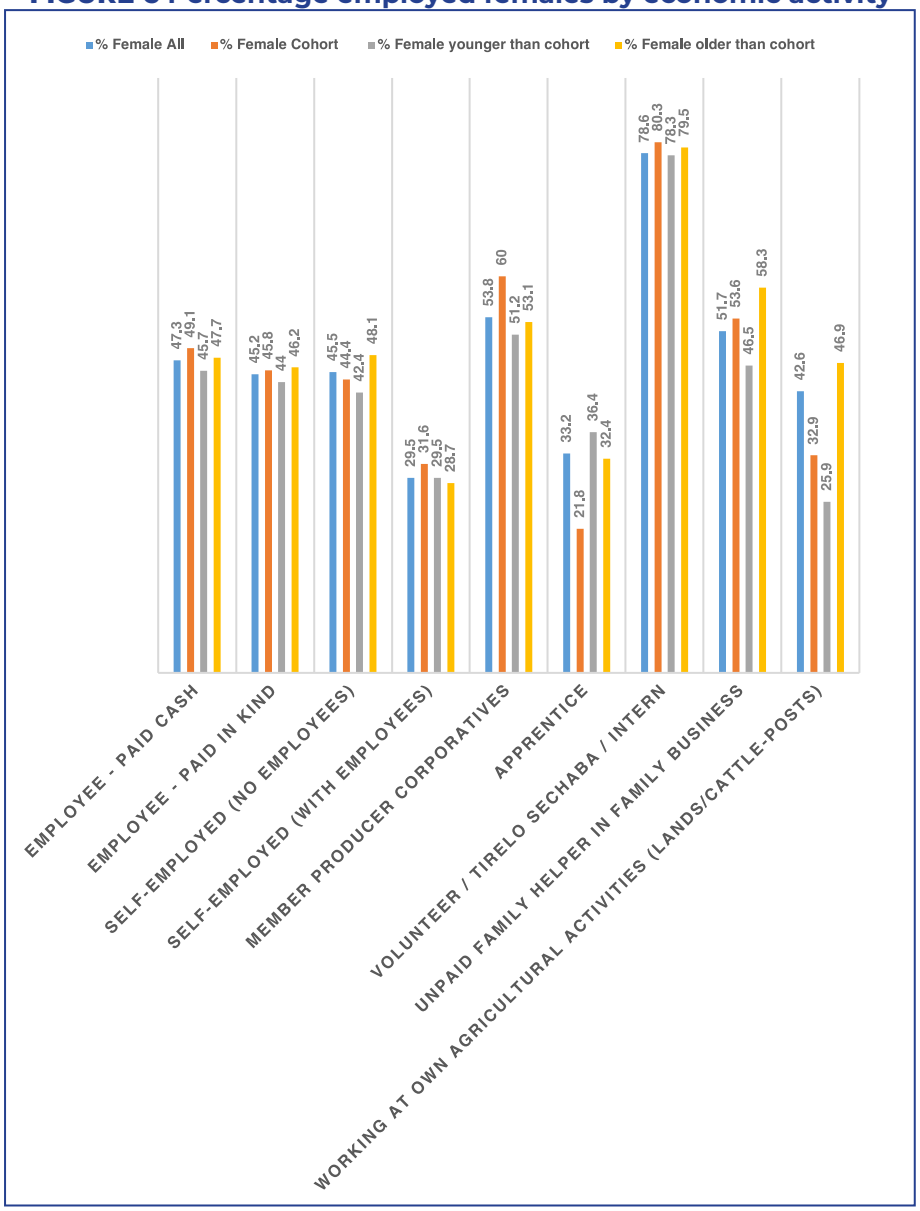


FIGURE 6 Percentage employed females by economic activity



POLICY IMPLICATIONS

This analysis reveals several critical policy implications that must be addressed to ensure balanced and sustainable development, especially achieving gender parity, fostering economic growth, and managing demographic changes.

a. **Balancing Gender Equality, Economic Growth, and Population Growth:** The paper highlights a paradox between advancing gender equality, economic growth and managing a diminishing population growth rate. Public policies must navigate this balance to ensure that Botswana fairs well in all these. Moreover, the population distribution pattern which is seemingly gender- and –economy structured may need to be evaluated and addressed.

b. **Addressing Emerging Gender Inequality:** While strides have been made in gender equality, the emergence of reverse inequalities is observed, particularly in education and some employment sectors. Therefore, the need to prevent new forms of gender disparity is established. This may require promoting an inclusive approach that addresses the needs of all genders. Also, education policies should focus on encouraging male participation in higher education sectors where they are underrepresented, ensuring that both genders have equal opportunities across fields of study.

c. **Economic Participation and Gender Roles:** The paper reveals that females are disproportionately engaged in unpaid housework and that they are most affected by unemployment. Therefore, policies should include targeted support for female participation in traditionally male-dominated fields, access to capital for female entrepreneurs, vocational training programs, and engender national budgeting system among others. A re-evaluation of educational policies may be necessary to ensure that both genders have equitable opportunities across all levels and fields of education as this may help to prevent the emergence of new forms of gender inequality.

CONCLUSIONS AND RECOMMENDATIONS

Botswana has made significant progress in gender equality, particularly in education and certain sectors of economic participation. This progress is a testament to the effectiveness of the incrementally developed gender equality-oriented policies implemented over the past few decades. This includes the country's commitment to international instruments. However, there are critical areas that require continued attention and strategic intervention. By addressing these areas, Botswana can better navigate the challenges of demographic changes, economic participation, and gender equality, ultimately achieving high-income status and prosperity for all by 2036. Some of the specific challenges include the signs of reverse gender inequality, particularly in the education sector, where females now surpass males in post-secondary education attainment. Botswana's gender inequality is not only sectoral, but also more likely to be geographical as demonstrated by varied population distribution, where females are fewer in some economically viable localities despite the country's population witnessing a higher percentage female than males.

In light of these, the following recommendations are made;

a. That Government should consider further research and policy dialogues on the declining population growth rate with a view to redirect the population policy, in its objects and inputs.

- **i)** The policy dialogue should consider an interplay between population, gender equality, and economic development, and culminate with consideration for economic growth, upward population growth rate, and gender equality.
- **ii)** The restrictive nature of some labour laws on fertility should also form part of research and policy dialogues, and should consider increasing maternity cover to at least more than three children.

b. Government should ensure that males are not left behind in the implementation of the current gender policy.

c. With Botswana poised for a higher income status, benchmarking from economies such as Chile and or Namibia in setting and facilitating the achievement of national development goals, including gender equality, may need to be considered.

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APPENDICES

TABLE 2 Highest level of education by sex and cohort, 2022 Census

LEVEL OF EDUCATION	TOTAL ALL	PERCENTAGE		YOUNGER THAN COHORT			COHORT			OLDER THAN COHORT		
		% ALL	% FEMALE	TOTAL	% ALL	% FEMALE	TOTAL	% ALL	% FEMALE	TOTAL	% ALL	% FEMALE
Pre Primary	**63, 322**	4.7	50.5	**62, 005**	7.3%	50.4	**167**	0.1	35.3%	**1, 150**	0.3	58.1%
Primary	**571, 568**	42.5	51.4	**392, 712**	46	48.6	**22, 417**	14.3	44.0	**156, 439**	46.7	59.4%
JC	**353, 363**	26.3	52.3	**237, 468**	27.8	54.0%	**57, 610**	36.8	50.4	**58, 285**	17.4	47
Senior Secondary	**18, 128**	1.3	56.4	**7, 032**	0.8	42.2	**715**	0.5	42.8%	**10, 381**	3.1	67
Non formal	**72, 048**	5.4	48	**32, 891**	3.9	53.1	**17, 237**	11.0	46.4	**21, 920**	6.5	41.8
Certificate	**112, 312**	8.4	57.5	**43, 755**	5.1	60.6%	**27, 815**	17.8	56.8	**40, 742**	12.2	54.7
Diploma	**125, 070**	9.3	53.9	**69, 140**	8.1	57.1	**24, 433**	15.6	53.5	**31, 497**	9.4	47.3
Degree	**13, 786**	1.0	50.5%	**3, 180**	0.4	59.6%	**3, 027**	1.9	55.3	**7, 579**	2.3	44.7
Post Grad	**15, 187**	1.1	50.5%	**5, 287**	0.6	57.7	**3, 061**	2.0	52.4	**6, 839**	2.0	44.1%
Total	**1, 344, 784**	**52.2**	**100**	**853, 470**	**100**	**51.8**	**156, 482**	**100**	**50.7**	**334, 832**	**100**	**54.0**

TABLE 3 Population and what they were doing since independence by cohort and sex, 2022 Census

	ALL			YOUNGER THAN COHORT			COHORT			OLDER THAN COHORT		
	TOTAL	% ALL	% FEMALE	TOTAL	% ALL	% FEMALE	TOTAL	% ALL	% FEMALE	TOTAL	% ALL	% FEMALE
Actively Seeking Work/ Business	305,910	30.7%	48.5	**188,979**	31.5%	49.5	**54,929**	**49.6%**	53.9	**62002**	20.9	44.2
House Work	254,977	25.6	70.5%	**96,392**	16.1	64.4	**33239**	**32.6**	73.0	**125346**	42.3	74.5
Student	277,252	27.8	51.5	**275,076**	45.9	51.4	**1266**	**1.2**	59.6	**910**	0.3	63.8
Retired	38,357	3.8	49.7	**251**	45.4%	0.00	**117**	**0.1**	35.0	**37989**	12.8%	49.8
Sick	34,566	3.5	59.3	**4,210**	0.7%	46	**2127**	**2.1**	46.9	**28229**	9.5	62.2%
Prisoner	919	0.1	48.7	**169**	0.0	20.7	**66**	**2.1**	46.9%	**684**	0.2	58.5
Other	85,568	8.6	48.4	**34,341**	5.7	45.5	**10245**	**10.0**	43.5	**40982**	13.8	51.7
All	**997,549**	**100**	**55.3**	**599,418**	**52.5**	**100**	**101989**	**56.7**	**100**	**296142**	**100**	**60.6**

TABLE 4 Cohort and what they were doing during past seven days preceding Census, by sex, 2022 Census

	ALL		YOUNGER THAN COHORT		COHORT		OLDER THAN COHORT	
	TOTAL	% FEMALE	TOTAL	% FEMALE	TOTAL	% FEMALE	TOTAL	% FEMALE
Employee - Paid Cash	**498,351**	47.3	**188,692**	45.7	**115,909**	49.1	**193,750**	47.7
Employee - Paid in Kind	**5,422**	45.2	**2,144**	44	**1108**	45.8	**2,170**	46.2
Self-employed (no employees)	**90,152**	45.5	**26,516**	42.4	**22,485**	44.4	**41151**	48.1
Self-employed (With Employees)	**19,647**	29.5	**3,774**	29.5	**4,678**	31.6	**11,195**	28.7
Member Producer Corporatives	**275**	53.8	**82**	51.2	**50**	60	**143**	53.1
Apprentice	**391**	33.2	**225**	36.4	**55**	21.8	**111**	32.4
Volunteer / Tirelo Sechaba / Intern	**9,999**	78.6	**7,457**	78.3	**751**	80.3	**1,791**	79.5
Unpaid family helper in family business	**2544**	51.7	**1,265**	46.5	**425**	53.6	**854**	58.3
Working at own agricultural activities (lands/cattle-posts)	**41,418**	42.6	**5,734**	25.9	**4,150**	32.9	**31,534**	46.9
All	**668,457**	**46.7**	**235,997**	**45.6%**	**149,662**	**47.5**	**282,798**	**47.1**

THEMATIC REPORT: GENDER DIMENSIONS IN BOTSWANA

Gobopamang Letamo and Tshepo Makone

EXECUTIVE SUMMARY

Botswana has signed and acceded to numerous international conventions and agreements in addition to developing national policies and strategies to ensure that gender equity and equality are realised in the country. From the seventeen (17) United Nations (UN) Sustainable Development Goals (SDGs), Goal 5, emphasises the responsibility of countries to eliminate all forms of discrimination and gender bias in rights, opportunities, and participation across all aspects of society.

This study aims to generate gender statistics that provide meaningful insights into well-being differences between women and men, girls and boys, and inform policy actions to address gender disparities. Specifically, this study assesses progress regarding gender dimensions in; education, disability, marriage and access to household assets.

The study design is cross-sectional, based on a complete count of all the people in Botswana, through the 2022 Population and Housing Census (2022 PHC). Data collection was conducted using three types of face-to-face questionnaires: household, institutional, and hotel institutional. Percentages and gender indices computed from actual population figures were used to investigate the existence (or absence) of disparities in selected gender dimensions of interest. These investigations employed various gender disparity measures such as sex ratio, gender gap, and Gender Parity Index (GPI).

The results indicated near gender parity across all areas assessed by the GPI, with slightly more females (54.1percent) than males completing school. Slightly more males drop out of school than females (6.1 percent and 5.6 percent for females and males respectively). Gender parity exists up to secondary school – nevertheless, more females are enrolled at the tertiary level. Females show higher percentages in non-formal education and diploma attainment, reflecting progress in higher education.

Compared to males, females show higher rates of disabilities in seeing, walking, remembering, and hearing. The gender gap and GPI highlight more females facing challenges, especially in walking, remembering, hearing, and self-care. Difficulty seeing is the most common disability among school-aged children, followed by hearing and remembering. Data indicate disabilities are more prevalent among female children across almost all domains. Prevalence of disabilities, particularly in seeing and hearing, is higher in female children than males **(see Table 4).**

Marriage data showed a rise in the proportion (49.6 percent to 62.4 percent) of never-married individuals and a decline (24.7 percent to 12.1 percent) in cohabitation. Men had a slightly higher marriage rate than women, while many women reported being widowed due to men's lower life expectancy. The median age for first marriage was 29, with men typically marrying at 31 and women at 26. Rural areas and irreligious individuals tend to marry at younger ages. Despite legal bans, child marriages persist in some areas, more often affecting females, risking pregnancy or childbirth complications. In 2022, out of 3,166 child marriages (1.63 percent of marriages), a greater proportion involved females (2.64 percent). The existence of child marriages underscores the need for concerted efforts to address this violation of human rights. Additionally, the results showed the complex interplay between marriage, gender inequality, age at first marriage, and the prevalence of child marriages, emphasising the importance of addressing societal norms and legal frameworks to protect individuals, especially girls, from early and forced marriages.

Analysing access to assets between female-headed and male-headed households revealed variations in overall wealth based on the analysis of: (i) Electronic communication/ICT assets; (ii) Livestock ownership and (iii) Ownership or access to land. Overall, there is a significant difference in asset ownership between male-headed and female-headed households. Male-headed households have a higher percentage of ownership for majority of the analysed assets. Access to electronic communication/ICT assets marginally favoured female-headed households in that they had a slightly higher percentage of radio ownership (0.6 percent) compared to male-headed households (0.5 percent) but significantly lower ownership for all other analysed assets. Disparities in ownership of household assets highlight the importance of equitable access to household assets, especially electronic communication/ICT assets and livestock, in promoting economic opportunities and overall well-being, while emphasising the need to address gender disparities in asset ownership and access.

Gender equality in education is making significant strides, as shown by the results. This progress underscores the ongoing importance of initiatives that promote gender equality in education at all levels. Disparities in the prevalence of disabilities showed gender differentials and this calls for concerted efforts to address gender disparities in disability prevalence and ensure equal access to education and opportunities for individuals with disabilities as part of broader efforts to achieve SDGs. Efforts are required for targeted interventions to address gender disparities in disability prevalence and ensure equal access to education and other opportunities for children with disabilities, regardless of gender.

It is proposed that further studies be undertaken to understand the underlying factors promoting the observed gender disparities such as those in disability prevalence, the persistence of child marriage practices, and varied access to electronic communication devices, ownership of assets and land to foster gender equality and inclusive development.

1. INTRODUCTION

1.1 Background

Gender dimensions encompass the various ways in which gender influences and interacts with different aspects of a society, culture, and individual lives. They expand into the roles, behaviours, expectations, and opportunities typically associated with being male or female given a specific context (Ruspini and Dale, 2002)– in this chapter, we use gender statistics to study this as gender dimensions of; education, disability, marriage as well as households and housing.

Gender statistics provide information that enables us to identify, produce and disseminate statistics that reflect the realities of the lives of men and women and policy issues relating to gender equality (UNECE, 2010). Empirical evidence demonstrates that women and men continue to have different: roles in society; access to and control of resources; and skills and interests (UNECE, 2010). As such, it is imperative to understand these differences through the use of gender statistics. Census data offer a basic understanding of the situation of women and men in a country, although it lacks qualitative information on the underlying factors that are responsible for the observed levels and trends. Gender statistics provide basis for analysis to assess differences or similarities in the situations and conditions of women and men and therefore raise consciousness and provide the impetus for debate and change (UNECE, 2010). Moreover, gender statistics are required for research to support the development and testing of explanations and theories to understand how gender operates in society. Gender inequality is a central theme in many of the SDG targets. Gender indicators serve as important diagnostic tools for policy and programme design, and are useful for holding institutions accountable for achieving gender-related targets (UNDP, 2018). It is based on the aforementioned that this chapter on gender dimensions was conceived and conceptualised.

1.2 Context of Gender Issues in Botswana

The Botswana Constitution guarantees all people the right to equality. Following the 1995 Fourth World Conference on Women in Beijing, Botswana formulated the National Gender Programme Framework (NGPF) which prioritised six (6) critical areas of concern for Batswana women, namely: (1) Women and poverty, including economic empowerment of women; (2) Women in Power and Decision-making; (3) Training and Education for Women; (4) Women in Health; (5) Violence Against Women, including Human Rights; and (6) The Girl Child (Republic of Botswana, 2012).

In September 2015, Botswana was among the 193 United Nations (UN) countries that adopted the 2030 Agenda for Sustainable Development which entails 17 Sustainable Development Goals (SDGs) which are universal, people-centred, and transformative (Republic of Botswana, 2018). The SDGs coincided with the preparation ongoing implementation of the various national and sub-national frameworks such as: Vision 2036; National Development Plan 11 (NDP 11); District Development Plan 8 (DDP 8) and Urban Development Plan 4 (UDP 4). Notably, key elements of the Africa Agenda 2063 were incorporated into the formulation of the SDGs (Republic of Botswana, 2018). The early 2030 SDGs target is likely to fast-track and facilitate the attainment of Vision 2036 targets six (6) years ahead (Republic of Botswana, 2018).

Various initiatives and strategies have been implemented to address gender inequalities observed through the six (6) critical areas of concern. These initiatives entail the elevation of the Botswana Gender Machinery, Women's Affairs Unit to a government Department. Thus, affirming the Government of Botswana's commitment to the establishment of appropriate mechanisms to enhance the status of women and promote gender equality. Other areas include reforming the legislation to increase the chance of improving the status of women and protecting their human rights (Republic of Botswana, 2012). Likewise, Botswana has developed sound development frameworks that have significantly contributed to improvements in access to education along with access to quality health and sanitation. In addition, Botswana has strong welfare programmes that aim to reduce poverty, vulnerability and increase social protection for its citizens (Republic of Botswana, 2012).

The Revised National Population Policy of Botswana (Botswana RNPP) states some of the following strategies to address gender issues in the country: (i) continue to review and enact laws to ensure gender equality in access to and control of productive resources; (ii) empower and encourage women to participate in decision-making; (iii) educate men and women through seminars and the media on the correct position of the law about the full legal capacity of adult women to consent to medical treatment and contraception; (iv) amend and repeal all laws that discriminate based on gender; and (v) identify vulnerable female-headed households and target programmes to enhance their participation in the economy (Republic of Botswana, 2010). The Addis Ababa Declaration on Population and Development (AADPD) states that by 2030, discrimination against women (and youth where relevant) in all spheres of domestic, economic, and political life must be eliminated and ensure that all, including women and the young, have equal rights to ownership and control of land, property, and inheritance.

Despite these achievements, challenges remain with poverty as one of the persistent key challenges the country faces and is more pronounced among women. Botswana is burdened with a high prevalence of gender-based violence (GBV) which was estimated at 53 percent by the SADC Gender and Development Index (SGDI) in the 2012 Botswana SADC Gender Protocol Barometer. Women are grossly underrepresented in positions of leadership and decision-making (Republic of Botswana, 2012). Hence, this study attempts to assess progress or lack thereof, regarding the attainment of gender equality using sex-disaggregated 2022 PHC and other data in the six (6) critical areas of concern in Botswana. Failure to redress existing gender inequalities will negatively affect the socioeconomic and demographic development ideals of the country. Study findings will therefore assist stakeholders to assess their progress or lack thereof, regarding the attainment of gender equality goals.

1.3 Objectives of the analysis

General Objective:

To assess progress regarding gender dimensions in: education, health (particularly disability), marriage and access to household assets.

Specific Objectives:

- To generate gender statistics to provide meaningful insight into the differences in well-being across women and men, girls and boys in Botswana using the 2022 PHC data.
- To establish actionable information on policy to address gender disparities in Botswana using the 2022 PHC analysis.

1.4 Glossary of gender and related concepts

This subsection defines and reviews select key concepts commonly used in gender research.

Gender: a social construct that refers to the identity, expression, roles and responsibilities of men and women in a given society. Gender roles and responsibilities are defined, modified and influenced by the prevailing social environment such as: culture, economic status, age, religion, and political milieu.

Sex: refers to the biological and physiological attributes of an individual which are predetermined at birth.

Worth noting, "Gender" and "sex" sometimes are used interchangeably, mainly because gender statistics can refer to data disaggregated by sex (UNECE, 2010).

Gender equality: implies the enjoyment of sameness, that is, the same; rights, resources, opportunities, outcomes and protection among; women, men, girls and boys (UNICEF, 2011).

Gender equity: relates to measurable outcomes that ensure fairness and justice in achieving gender equality. It takes into account the impact of past and present social structures that have disadvantaged women relative to men. When men and women enjoy equal rights, opportunities and entitlements (gender equality), it leads to outcomes that are fair and just (Derbyshire, 2002).

Gender analysis: the process of collecting and analysing data that are disaggregated by sex to understand the differences between men and women in society. Knowledge generated from gender analysis can be used to identify gaps in the existing policies and programmes and inform where interventions could take place at national and sub-national levels to address inequalities.

Gender gap: The gender gap describes the inequalities between men and women across various aspects of life, including social standing, political participation, education, culture, and economic opportunities (World Economic Forum, 2017).

Gender Parity Index (GPI): the ratio of the number or proportion of the female population to the male population for a given indicator. A GPI of: one (1) indicates parity between males and females; less than 1 indicates female disadvantage; and more than 1 indicates male disadvantage.

2. LITERATURE REVIEW

Botswana is a signatory to several international human rights treaties and their protocols. Some of the treaties that are of relevance to gender are the International Convention on Civil and Political Rights (ICCPR), the African Charter on Human and People's Rights (ACHPR)and its Protocol, the International Convention on the Elimination of All Forms of Racial Discrimination (ICERD), the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), the Optional Protocol to CEDAW, the Beijing Platform for Action, and the International Conference on Population and Development (ICPD) (Republic of Botswana, 2012).

The 1995 United Nations Beijing Platform for Action identified 12 critical areas of concern calling for strategic actions. In turn, these gender concerns identified what gender statistics will need to be collected to provide a basis for policies and programmes and their monitoring and evaluation (UNECE, 2010). The 12 critical areas are: (1) **Poverty** – persistent and increasing burden of poverty on women; (2) **Education and training** – inequalities and inadequacies in education and unequal access to education and training; (3) **Health** – inequalities and inadequacies in education and unequal access to healthcare and related services; (4) **Violence** – violence against women; (5) **Armed conflict** – the effects of armed or other kinds of conflict on women, including those living under foreign occupation; (6) **Economy** – inequality in economic structures and policies, in all forms of productive activities and access to resources; (7) **Power and decision-making** – inequality between men and women in the sharing of power and decision-making at all levels; (8) **Institutional mechanisms for the advancement of women** – Insufficient mechanisms at all levels to promote the advancement of women; (9) **Human rights of women** – lack of respect for and inadequate promotion and protection of the human rights of women; (10) Media – stereotyping of women and inequality of women's access to and participation in all communication systems, especially in the media; (11) **Environment** – gender inequalities in the management of natural resources and in safeguarding the environment; and (12) **The girl child** – persistent discrimination against and violation of the rights of the girl child.

At the continental and regional level, Botswana has had reservations about signing the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa, the Solemn Declaration on Gender Equality, and the Southern African Development Community (SADC) Gender Protocol. The implications of this is that Batswana women are placed at a greater disadvantage and the potential to fast-track the attainment of gender equality in Botswana through the targets and time frames set by these instruments is grossly undermined (Republic of Botswana, 2012).

One of the key SDGs in the context of gender is Goal 5 whose aim is to achieve gender equality and empowerment of all women and girls. Botswana Vision 2036 calls for equal rights and opportunities for women and men in all areas of society to fully participate in the economic, political, and cultural development of the country. In addition, the Botswana RNPP aims to ensure gender equality and equity in the socio-cultural, political, economic, and legal spheres and the elimination of GBV. All these global and national policy frameworks share a common objective: achieving gender equality.

2.1 Theoretical Framework on Gender and Development

The World Development Report 2012 (WDR 2012) provides a framework for linking gender equality to the functioning of households, markets, and institutions. Three key outcome dimensions of gender equality are highlighted in the framework: endowments; economic opportunities; and voice and agency (Casabonne, 2016). According to the framework, households, markets, and institutions, along with their interrelations, influence gender equality and economic development (World Bank Group, 2019). It aims to address four (4) key objectives crucial for promoting gender equality and bridging the existing opportunity gaps between men and women (World Bank Group, 2019). Gender equality is significant for development for multiple reasons. The World Bank Group (2019) has pinpointed specific areas for enhancing gender equality as outlined below.

i) Improving human endowment gaps – reduce health, education and social protection gaps between men and women. Investments in health and education ensure people meet their potential.

ii) Removing constraints for more and better jobs – increase women's participation in the labour force, enhance income-generating opportunities, and improve access to key productive assets. Women's participation in the labour force matters for economies, women's voices, and agency. However, across countries, the participation of women in the labour force lags behind men due to various factors such as skills gaps, occupational sex segregation, and lack of child/elder care, mobility constraints, unpaid women's work, gender pay gaps, and legal and regulatory constraints.

iii) Removing barriers to women's ownership and control of assets – improve women's access to land, housing and technology. Owning assets helps people generate income, access capital and credit, and cope with shocks. Barriers for women include no access to financial credit and not having proper identification which prevents women from getting mortgages or connections to services.

iv) Enhancing women's voice and agency and engaging men and boys – include women in decision making on service delivery; reduce gender-based violence and its impact in conflict situations. Addressing voice and agency constraints requires engaging men and boys as change agents, changing inequitable social norms, discriminatory laws, and legal institutions, challenging gender stereotypes, and developing programmes that promote economic opportunities in emerging high-growth sectors, social protection, and education, especially STEM (World Bank Group, 2019).

The framework has additionally identified multiple constraints that drive inequality between men and women. The four mechanisms that drive inequalities between men and women are listed below. The framework identifies what problems need to be tackled and whether interventions should target formal institutions, informal institutions, markets, or households to address inequality.

Formal institutions – laws, regulatory frameworks, and mechanisms for the delivery of state services such as law enforcement, health care, and provision of basic infrastructure.

Informal institutions – gender roles, beliefs, social norms, and social networks that affect household bargaining.

Markets – the market for labour, credit, land and goods, which determines the returns to household decisions and investments.

Households – the context for such decisions as to how many children to have and when to have them, how much to spend on health and education for daughters and sons, and how to allocate different tasks (inside and outside the household) (Casabonne, 2016).

3. METHODOLOGY

This section discusses the research design used, data collection methods, data analysis methods used and ethical considerations adopted in this chapter.

3.1 Research design

The study is based on data collected cross-sectionally through a population census, which is a complete count of all the people in Botswana. Particularly, the 2022 Botswana Population and Housing Census in lieu of the postponed 2021 PHC.

3.2 Data collection methods

The 2022 PHC data were collected using three face-to-face questionnaires. One of the questionnaires was the household questionnaire which was designed to collect data from households. Another questionnaire was the institutional questionnaire which consisted of two types – (i) institutional questionnaire designed for tertiary students living away from their parental homes while attending college or university; the homeless, army staying in army barracks; and mine workers staying in mine hostels, and (ii) hotel institutional questionnaire which covered patients in hospitals, persons staying in hotels, lodges, safari camps, and prisoners. It should be noted that the institutional questionnaire was a shorter version of the household questionnaire. After data collection, the data were merged by Statistics Botswana to create a single data file which was used for data analysis.

3.3 Measurement of variables

Disability: measured through five domains: seeing; hearing; communicating; walking; remembering; and self-care. The responses for each of the domains were categorised as: (1) No difficulty; (2) Some difficulty; (3) A lot of difficulty; and (4) Cannot do at all.

Marital status: measured by the following categories: married, never married; living together; separated, divorced, widowed; divorced but now living together; and widowed but now living together. Because of few cases in some categories, particularly for cross-tabulation, a decision was taken to recode it into the following broad categories: married; never married; living together (living together, divorced but now living together, and widowed but now living together); and formerly married (separated, divorced and widowed).

Religion: measured using the following categories: African Traditional Religion; Christian; Muslim; Baha'i; Hindu; No religion; Rastafarians; and Other. As few cases were observed in some of these categories, it was decided to create broader religious categories to reduce the problem of a few cases in the cells during cross-tabulations and created the following categories: Christianity; African Traditional Religion; No religion; and other (Muslim; Baha'i; Hindu, Rastafarians, and Other).

3.4 Data Analysis and Procedures

Percentages and gender indices computed from the actual population figures are commonly used to show the existence (or nonexistence) of disparities in selected socioeconomic and demographic spheres and to highlight gender issues of concern. In some cases, population figures and proportions are used to further compute ratios or gaps to help identify disparities and possible areas of gender inequality. Some indicators are obtained directly from previously published reports to establish trends (Republic of the Union of Myanmar, 2017). These entail various gender disparity measures such as sex ratio, gender gap, and gender parity index.

4. FINDINGS AND DISCUSSIONS

Key issues investigated in this section include gender dimensions in: education; health (particularly disability); marriage; and access to household assets.

4.1 Gender dimensions in education

Education is a fundamental human right essential for socio-economic progress. It is linked to increased food security, reduced poverty, decreased disparities, and improved health outcomes (Burchi, 2006). Enabling broader educational opportunities for both genders enhances their prospects of engaging in the labour force and diverse spheres of societal engagement.

4.1.1 School attendance

The main institutional mechanism for developing human skills and knowledge is the formal education system, which includes schools, ranging from those offering early childhood education to institutions of higher learning.

Table 1 below shows that of all the persons aged 2 years and over, 29 percent were still at school, 53 percent completed school and 12 percent never attended school. The proportion of those who completed school was slightly higher for females (54.1 percent) than for males (51.5 percent). More males (6.1 percent) than females (5.6 percent) dropped out of school.

TABLE 1: Percentage of the population aged 2 years and over by school attendance and sex

SCHOOL ATTENDANCE	TOTAL	MALE	FEMALE
Still at school	29.1	29.5	28.7
Completed school	52.9	51.5	54.1
Discontinued school	5.9	6.1	5.6
Never attended school	12.2	12.8	11.6

Source: 2022 PHC

Table 2 presented below illustrates the percentage of individuals aged 2 years and above indicating whether they have ever attended school and their current status. The Gender Parity Index (GPI) serves as a metric to evaluate gender equality between females and males. A GPI value of 1.0 signifies complete gender parity, where male and female percentages are equivalent. Values exceeding 1.0 denote greater female attendance, while values below 1.0 signify greater male attendance. According to the Gender Parity Index (GPI), there is nearly equal representation of both genders across all evaluated areas, as the scores are close to 1.0.

TABLE 2: School attendance by sex, gender gap, and gender gap index for population aged 2 and above

SCHOOL ATTENDANCE	TOTAL	MALE	FEMALE	GENDER GAP*	GENDER PARITY INDEX**
Still at school	**29.1**	29.5	28.7	- 0.8	0.97
Completed school	**52.9**	51.5	54.1	+2.6	1.05
Discontinued school	**5.9**	6.1	5.6	-0.5	0.92
Never attended school	**12.2**	12.8	11.6	-1.2	0.91

***Gender Gap** = Percentage female – Percentage male
****Gender Gap Index** = Percentage female / Percentage male
Source: 2022 PHC

4.1.2 Highest educational attainment

The educational achievements, particularly the fulfilment of primary and secondary schooling, serve as benchmarks for understanding the overall educational status of a populace. Under SDG 4 (Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all), Target 4.1 urges national governments to ensure that every girl and boy can access and complete primary and secondary education of high quality without financial barriers, leading to effective outcomes aligned with Sustainable Development Goal 4 by 2030.

The table below shows that there is gender parity between males and females up to the secondary school level. However, at the tertiary level, there was a slightly higher proportion of females than males **(See Table 3).**

TABLE 3: Percentage of the population aged 2 years and over by sex, gender gap, and gender gap index

HIGHEST LEVEL OF EDUCATION ATTAINED	TOTAL	MALE	FEMALE	GENDER GAP*	GENDER PARITY INDEX**
Preschool	**3.7**	3.7	3.6	-0.1	0.97
Primary	**30.1**	30.0	29.9	-0.1	0.99
Secondary	**47.4**	47.9	47.0	-0.9	0.98
Non-formal	**1.0**	0.4	0.5	0.1	1.25
Certificate	**3.8**	4.1	3.5	0.6	0.85
Diploma	**5.9**	5.2	6.6	1.4	1.27
Degree	**6.6**	6.3	6.9	0.6	1.10
Postgraduate	**0.7**	0.7	0.7	0.0	1.00
Other degrees	**0.8**	0.8	0.8	0.0	1.00

***Gender Gap** = Percentage female – Percentage male
****Gender Gap Index** = Percentage female / Percentage male
Source: 2022 PHC

4.2 Gender dimensions of disability

From SDG 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all), Target 8.5, urges governments worldwide to strive for complete and meaningful employment opportunities and fair working conditions for everyone, regardless of gender, age, or disability, with equal compensation for equivalent work by 2030 (United Nations, 2015). This highlights the crucial need for precise and dependable data concerning individuals with disabilities to inform policy-making and programme development. The 2022 PHC question on disability covered five domains of functioning: seeing, hearing, walking, remembering or concentrating, and self-care. The responses were coded to one of four categories of difficulty: 1) No difficulty; 2) Some difficulty; 3) A lot of difficulty; and 4) Cannot do at all. The responses can further be recoded in terms of severity as Severe (Cannot do at all); Moderate (A lot of difficulty); Mild (Some difficulty); and No disability (No difficulty).

4.2.1 Prevalence of disability by gender

According to the 2022 PHC analysis, the most prevalent disabilities were: seeing (16.5 percent); walking (6.4 percent); remembering (6.2 percent); and hearing (5.5 percent). Disability was more prevalent among females than males.

The proportion of females who have difficulty seeing was higher than that of males, 20.9 percent and 12.8 percent, respectively. Walking difficulties were more prevalent among females than males, 9.0 percent and 4.4 percent, respectively.

The gender gap and GPI demonstrated that a higher proportion of females experienced the most difficulties in walking than males - with a GPI of 3.0 followed by a GPI of 2.5 expressing that more females have difficulty remembering than males. Compared to males, the GPI was still high for females for hearing, and self-care **(See Table 4 below).**

TABLE 4: Percentages of persons aged 5 years and over with disability by domain by degree by sex

DOMAIN AND DEGREE	MALE	FEMALE	TOTAL	GENDER GAP*	GENDER PARITY INDEX**
DIFFICULTY SEEING:					
No difficulty	87.1	79.1	83.5	-8	0.91
Some difficulty	11.2	18.2	14.4	7	1.63
A lot of difficulty	1.3	2.4	1.8	1.1	1.85
Cannot see at all	0.3	0.3	0.3	0	1
DIFFICULTY HEARING:					
No difficulty	95.6	93.2	94.5	-2.4	0.97
Some difficulty	3.7	5.8	4.7	2.1	1.57
A lot of difficulty	0.6	0.9	0.7	0.3	1.5
Cannot hear at all	0.1	0.1	0.1	0	1
DIFFICULTY COMMUNICATING:					
No difficulty	99	98.9	99	-0.1	1
Some difficulty	0.9	0.9	0.9	0	1
A lot of difficulty	0.1	0.1	0.1	0	1
Cannot communicate at all	0	0	0	0	1
DIFFICULTY WALKING:					
No difficulty	95.6	91	93.6	-4.6	0.95
Some difficulty	3.4	6.8	4.9	3.4	2
A lot of difficulty	0.9	1.9	1.3	1	2.11
Cannot walk at all	0.1	0.3	0.2	0.2	3
DIFFICULTY REMEMBERING:					
No difficulty	95.6	91.5	93.8	-4.1	0.96
Some difficulty	3.7	6.9	5.2	3.2	1.86
A lot of difficulty	0.6	1.5	1	0.9	2.5
Cannot remember at all	0	0.1	0.1	0.1	-
DIFFICULTY IN SELF-CARE:					
No difficulty	98.6	97.9	98.3	-0.7	0.99
Some difficulty	1.1	1.6	1.3	0.5	1.45
A lot of difficulty	0.3	0.4	0.3	0.1	1.33
Cannot do self-care at all	0.1	0.2	0.1	0.1	2

***Gender Gap** = Percentage female – Percentage male
****Gender Gap Index** = Percentage female / Percentage male
Source: 2022 PHC

4.2.2 School attendance of children with disabilities

Individuals with disabilities should have equal access to socioeconomic opportunities, including education, without facing discrimination based on their sex or gender as SDG 4 aims to achieve.

The most prevalent disability among school children aged 0-17 years is seeing difficulty (6.1 percent), followed by hearing (1.9 percent) and remembering (1.4 percent) **(See Table 5 below).**

TABLE 5: School attendance of children 0-17 years by disability status

DOMAIN AND DEGREE	EVER ATTENDED SCHOOL?				
	STILL AT SCHOOL	COMPLETED SCHOOL	DISCONTINUED	NEVER ATTENDED	TOTAL
DIFFICULTY SEEING:					
No difficulty	92.9	95	95.7	97.7	**93.9**
Some difficulty	6.6	4.5	3.9	2.3	**5.6**
A lot of difficulty	0.5	0.5	0.4	0	**0.5**
DIFFICULTY HEARING:					
No difficulty	98.5	97.9	96.5	97.7	**98.1**
Some difficulty	1.3	2.1	2.7	0	**1.7**
A lot of difficulty	0.2	0	0.8	2.3	**0.2**
DIFFICULTY COMMUNICATING:					
No difficulty	99.5	99.4	98.4	97.7	**99.4**
Some difficulty	0.5	0.6	1.2	0	**0.6**
A lot of difficulty	0	0	0.4	0	**0**
Cannot communicate at all	0	0	0	2.3	**0**
DIFFICULTY WALKING:					
No difficulty	99.8	98.8	99.2	100	**99.7**
Some difficulty	0.2	0.2	0.8	0	**0.3**
DIFFICULTY REMEMBERING:					
No difficulty	98.7	98.4	98.4	100	**98.6**
Some difficulty	1.3	1.4	1.6	0	**1.3**
A lot of difficulty	0.1	0.2	0	0	**0.1**
DIFFICULTY IN SELF-CARE:					
No difficulty	99.4	99.8	98.8	97.7	**99.5**
Some difficulty	0.6	0.2	1.2	0	**0.5**
A lot of difficulty	0	0	0	2.3	**0**

Source: 2022 PHC

TABLE 6: School attendance of children 0-17 years by disability and sex

DOMAIN AND DEGREE	MALE				
	EVER ATTENDED SCHOOL?				
	STILL AT SCHOOL	COMPLETED SCHOOL	DISCONTINUED	NEVER ATTENDED	TOTAL
DIFFICULTY SEEING:					
No difficulty	94.4	96.2	96.4	96.8	95.3
Some difficulty	5.2	3.5	3	3.2	4.3
A lot of difficulty	0.4	0.3	0.5	0	0.4
DIFFICULTY HEARING:					
No difficulty	98.5	98.7	97	96.8	98.4
Some difficulty	1.3	1.3	2	0	1.4
A lot of difficulty	0.2	0	1	3.2	0.2
DIFFICULTY COMMUNICATING:					
No difficulty	99.5	99.9	98	96.8	99.4
Some difficulty	0.5	0.1	1.5	0	0.5
A lot of difficulty	0	0	0.5	0	0.1
Cannot communicate at all	0	0	0	3.2	0.1
DIFFICULTY WALKING:					
No difficulty	99.8	99.6	99	100	99.6
Some difficulty	0.2	0.4	1	0	0.4
DIFFICULTY REMEMBERING:					
No difficulty	98.1	98.8	98.5	100	98.4
Some difficulty	1.8	1	1.5	0	1.5
A lot of difficulty	0.1	0.1	0	0	0.1
DIFFICULTY IN SELF-CARE:					
No difficulty	99.6	99.9	99	96.8	99.6
Some difficulty	0.4	0	1	0	0.3
A lot of difficulty	0	0.1	0	3.2	0.1

Source: 2022 PHC

TABLE 6A: School attendance of children 0-17 years by disability and sex (continuous - female)

DOMAIN AND DEGREE	FEMALE				
	STILL AT SCHOOL	COMPLETED SCHOOL	DISCONTINUED	NEVER ATTENDED	TOTAL
DIFFICULTY SEEING:					
No difficulty	91.2	93.3	93.4	100	**92.1**
Some difficulty	8.1	5.9	6.6	0	**7.2**
A lot of difficulty	0.7	0.8	0	0	**0.7**
DIFFICULTY HEARING:					
No difficulty	98.4	96.9	95.1	100	**97.8**
Some difficulty	1.4	3.1	4.9	0	**2.1**
A lot of difficulty	0.1	0	0	0	**0.1**
DIFFICULTY COMMUNICATING:					
No difficulty	99.4	98.9	100	100	**99.3**
Some difficulty	0.6	1.1	0	0	**0.7**
DIFFICULTY WALKING:					
No difficulty	99.8	100	100	100	**99.9**
Some difficulty	0.2	0	0	0	**0.1**
DIFFICULTY REMEMBERING:					
No difficulty	99.3	97.7	98.4	100	**98.7**
Some difficulty	0.7	1.9	1.6	0	**1.1**
A lot of difficulty	0	0.4	0	0	**0.1**
DIFFICULTY IN SELF-CARE:					
No difficulty	99.2	99.6	98.4	100	**99.3**
Some difficulty	0.8	0.4	1.6	0	**0.7**

Source: 2022 PHC

Table 6 shows that seeing difficulty is the most prevalent disability, particularly among female children than male children, 7.2 percent and 4.3 percent respectively. The next common disability is hearing difficulty which again is more common among female children than male children, 2.1 percent and 1.4 percent respectively. The 2022 PHC data demonstrate that disability is more prevalent among female children than male children in almost all the disability domains - excluding trouble remembering where male children (1.6 percent) have more trouble remembering than female children (1.2 percent).

4.3 Gender dimensions in marriage

Marriage serves as a pivotal factor in women's susceptibility to pregnancy, thus holding significance in comprehending fertility patterns. Societies characterised by early marriage often exhibit early childbirth and elevated fertility rates. Consequently, monitoring age at marriage trends becomes imperative.

4.3.1 Marital status of the population aged 18 years over by gender

The table below shows that the proportion of the population reporting never being married has risen from 47 percent in 2011 to 62 percent in 2022 while those reporting living together dropped substantially from 25 percent in 2011 to only 12 percent in 2022. A slightly higher percentage of men reported being married compared to their female counterparts. A large proportion of women reported being widowed compared to men, reflecting the low life expectancy of men.

TABLE 7: Marital status of the population aged 18 years and over by gender (%)

MARITAL STATUS	2011*			2022		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
Married	22.7	21.2	**21.9**	21.5	20.4	**21.0**
Never married	49.6	45	**47.2**	63.9	61.1	**62.4**
Living together	24.7	24.5	**24.6**	12.4	11.8	**12.1**
Separated	0.5	0.6	**0.5**	0.2	0.2	**0.2**
Divorced	0.9	1.4	**1.2**	1	1.5	**1.3**
Widowed	1.6	7.3	**4.6**	1	4.8	**3.0**

Source: *Monyeki (2014) and 2022 PHC

4.3.2 Age at first marriage

Examining the age of marriage as the central point shifts the focus to postponing marriages as a remedy, veiling the fundamental issue of early marriage, which stems from gender inequality. The entrenched patriarchal norms and systems that constrain girls' autonomy over their sexuality, bodies, and relationships persist beyond the age of 18. Even at 19, young women frequently find themselves lacking agency in choosing their partners, deciding on parenthood, or pursuing professional aspirations. In this paper, two most common indicators are used to measure age at first marriage, namely: median age at first marriage and percent married before age 18.

4.3.3 Median age at first marriage

The indicator is calculated as:

(Number of women [or men] who were married or started living in a consensual union at single year of age categories/Total number of women [or men] aged 15-49 of all marital statuses) X 100

The median age for first marriage was 29 years, with men typically marrying at 31 years and women at 26 years **(Refer to Table 8 below)**. Across the board, males consistently exhibit a greater median age at first marriage than females.

Table 8 provides data on the median age at first marriage or union, broken down by various socioeconomic characteristics such as place of residence, marital status of the mother, and religious affiliation. The median age at first marriage or union is highest in rural areas (32.0 for males, 28.0 for females) compared to towns and urban villages. The median age is lowest for those whose mothers are formerly married, indicating possibly earlier initiation into marriage or union (31.0 for males, 24.0 for females). It is highest for those whose mothers are currently married (33.0 for males, 28.0 for females). The median age tends to be higher among Christians compared to other religious affiliations (32.0 for males and 26.0 for females). The lowest median ages are observed among those with no religion (28.0 for males, and 24.0 for females).

Overall, the table suggests that socioeconomic characteristics such as place of residence, maternal marital status, and religious affiliation play a role in determining the age at which individuals enter their first marriage or union, with rural areas, formerly married mothers, and those with no religious affiliation tending to marry at younger ages.

Table 8 Median age at first marriage or in union by selected socioeconomic characteristics

VARIABLES			
	MALE	FEMALE	TOTAL
TOTAL	**31.0**	**26.0**	**29.0**
PLACE OF RESIDENCE			
Towns	31.0	26.0	29.0
Urban Villages	32.0	26.0	29.0
Rural areas	32.0	28.0	30.0
MARITAL STATUS OF THE MOTHER			
Married	33.0	28.0	30.0
Living together	28.0	24.0	26.0
Formerly married	31.0	24.0	25.0
RELIGIOUS AFFILIATION			
Christianity	32.0	26.0	29.0
African Traditional	31.0	24.0	29.0
No religion	28.0	24.0	26.0
Other	28.0	23.0	26.0

4.3.4 Child marriages

Child marriage is "any marriage or union where at least one of the parties is under 18 years old" (UNICEF, 2022). One of the key areas to be investigated was the prevalence of child marriages in Botswana. The following legal instruments forbid child marriages: the Marriage Act of 2022 Section 15 and the Children's Act of 2010. The Penal Code prohibits sexual intercourse with girls under the age of 16 years. Despite these prohibitions, police reports and other studies report the practice of child marriage and child sexual abuse in some areas of Botswana. The proportion of women (or men) aged 20-24 years who were married or in a union before age 15 and before age 18 is a SDG Indicator for monitoring progress toward ending child, early, and forced marriage **(SDG Indicator 5.3.1)**.

The 2022 PHC asked the question on the age at first marriage/union. The inclusion of that variable enabled the researcher to estimate the percentage of women aged 20-24 years old who were married at or in a union before age 15 and before age 18. There are two reasons for using women 20-24-year-olds who first married or entered into a union before age 18. The first reason is that the percentage of girls aged 15-19 who are married or in a union at any given time includes girls who are 18 and 19 years old and no longer children, according to the internationally accepted definition of a child (UNICEF, 2014). Secondly, the indicator includes girls aged 15, 16 and 17 who are classified as single, but who could eventually marry or enter into a union before the age of 18. Using women aged 20-24 avoids the above limitations and so more accurately approximates the real extent of child marriages (Kumar, 2016).

The prevalence of child marriage is calculated as the number of women (or men) aged 20-24 who indicated that they were married or in union before age 18 divided by the total number of women (or men) aged 20-24 years. The analysis relied on a direct question on age at first marriage: "How old was… when he/she first got married or in union?".

Child marriage = Number of women (or men) aged 20-24 who were married or in union before age 18 / Total number of women (or men) aged 20-24 years.

Table 9 illustrates that in 2022, out of a total of 3,166 child marriages, a greater proportion involved females than males, with 2,609 and 557 respectively. The majority of these child marriages were predominantly between individuals who were cohabiting, regardless of gender.

Table 9: Total number of women and men aged 20-24 who married before age

MARITAL STATUS	MALE	FEMALE	TOTAL
Married	32	325	357
Living together	525	2,284	2,809
TOTAL	**557**	**2.609**	**3,166**

Source: 2022 PHC

Table 10 below indicates that child marriages comprised 1.63 percent, with a larger proportion involving females than males, 2.64 percent and 0.58 percent, respectively. These statistics demonstrate that child marriages are more prevalent among females than males.

Table 10: Percentage of women and men aged 20-24 who married before age 18

MARITAL STATUS	MALE	FEMALE	TOTAL
Married/Living together	(557/95,239) = **0.58**	(2609/98,893) = **2.64**	(3166/194,132) = **1.63**

Source: 2022 PHC

Child marriage is a violation of human rights. A UNFPA (2022) report states that child marriage threatens girls' lives and health, and limits their prospects. Girls pressed into child marriage often become pregnant while still adolescents, increasing the risk of complications in pregnancy or childbirth. These complications are the leading cause of death among older adolescent girls (UNFPA, 2022).

4.4 Gender dimensions of households and housing

4.4.1 Access to household assets by household headship

Analysing access to assets between female-headed and male-headed households could reveal variations in their overall wealth. While prior research commonly suggests that female-headed households tend to be economically disadvantaged compared to male-headed households, some studies in ASEAN countries have presented contrasting results (Klassen et al, 2011). This report examines household assets, data for which were gathered during the 2022 PHC, categorised by their functionality and potential utility for household members. Two primary classifications are recognised:

(1) Electronic communication/ICT assets: These assets are crucial as they enable household members not only to stay updated on current events and communicate easily along with access to information regarding emerging technologies, economic opportunities, healthcare, and education prospects. ICT has been acknowledged as a potent tool in the global fight against poverty, offering developing nations an unprecedented chance to achieve crucial development objectives such as poverty alleviation, basic healthcare, and education. The expansion of ICT is now acknowledged as a pivotal facilitator in attaining the United Nations Sustainable Development Goals (UN SDGs) (Tjoa and Tjoa, 2016).

(2) Mobility/transport and commercial assets: These assets are vital for facilitating household members' access to markets, educational institutions, and healthcare facilities, while bolstering economic activity for both men and women. Regrettably, the analysis of mobility assets could not be included due to inherent limitations in data aggregation and grouping. As a result, this aspect could not be incorporated into the analysis.

Table 11 below presents accessibility to household electronic communications/ ICT devices. The most prevalent electronic communications/ICT device is the cellphone, with 73.8 percent of male-headed households compared to 81.0 percent of female-headed households having access to cellphones. Concerning radio access, 7.7 percent of male-headed households compared to 3.6 percent of female-headed households.

Table 11: Percentage of male- and female-headed households by accessibility to household assets

PERCENTAGE OF HOUSEHOLDS THAT HAVE ACCESS TO NAMED ASSETS		
HOUSEHOLD ASSETS	MALE-HEADED HOUSEHOLDS	FEMALE-HEADED HOUSEHOLDS
Electronic communications/ICT		
Radio	7.7	3.6
Television	0.5	0.6
Cellphone	73.8	81
Computer	0.2	0.2

Source: 2022 PHC

Table 12: Percentage of male- and female-headed households by ownership of livestock and land

PERCENTAGE OF HOUSEHOLDS THAT OWN OR HAVE ACCESS TO THE NAMED ASSETS		
HOUSEHOLD ASSETS	MALE-HEADED HOUSEHOLDS	FEMALE-HEADED HOUSEHOLDS
Ownership of livestock		
Own	31.5	26.5
Look after	6.4	1
Both own and look after	11.9	9.8
No	50.2	62.6
Ownership or access to land		
Own land or have access to land for ploughing	35.8	35

Source: 2022 PHC

Table 12 displays information regarding the ownership of livestock and land categorised by household headship. The data reveals that a greater percentage of households headed by males possessed livestock compared to those headed by females, with figures standing at 31.5 percent and 26.5 percent respectively. Furthermore, a larger proportion of male-headed households both own and care for livestock in comparison to female-headed households, with rates of 11.9 percent and 9.8 percent respectively. There are no gender differentials about ownership or access to land.

5. POLICY IMPLICATIONS

This section presents implications of key findings from the 2022 PHC in terms of the development of policies and programmes that will address the identified gender issues from the dimensions thereof – including the achievement of the overall objective of the SDGs, to leave no one behind, by ensuring full participation of women and men, girls and boys, in Botswana. They are as follows:

Address the existence of child marriage

The 2022 PHC Census data showed that women aged 20-24 who were married or in union before age 18 was estimated at 2.64 percent.

Thus, the existence of child marriage underscores the need for continued efforts to address this human rights violation. This information will assist the Government of Botswana to report on SDG indicator 5.3.1 intended to account for the Proportion of women aged 20-24 years who were married or were in a union before age 15 and before age 18 as it has been missing.

Introduce/Strengthen Gender-Sensitive Disability Assistance Programmes

A high prevalence of disability among females with regards to walking, remembering, hearing, seeing and self-care calls for the Government and development partners to advance interventions that target females with disability, especially disability related to walking, remembering, hearing, seeing and self-care. This is particularly important given that most of the families rely on females to care for sick family members at home.

Promote Gender-Responsive Livestock Ownership Programmes, Facilitate Access to Asset Ownership for Female-headed Households and Ensure Equitable Access to Land

A higher percentage of male-headed households have ownership of livestock and ownership/access to land than their female-headed counterparts. There is therefore a need for targeted interventions that address the gender inequalities that exist with regard to these assets.

Promote Inclusive Education Policies

The gender parity that exists between males and females in education is commendable therefore the Botswana Government should continue the current education interventions that appear to be producing the desired gender parity.

6. CONCLUSION AND RECOMMENDATIONS

This paper aimed to generate gender statistics to provide meaningful insight into the differences in well-being across women and men, girls and boys, as well as actionable information on policy to address gender disparities in Botswana using the 2022 Population and Housing Census data.

The key findings about gender dimensions in education is that the majority of individuals aged two (2) years and above have completed school, with a slightly higher completion rate for females than males. However, more males drop out of school compared to females. It further emerged that gender parity exists up to the secondary school level, with slightly more females than males at the tertiary level.

Regarding gender dimensions in disability, it was found that disability was more prevalent among females than males, particularly in domains such as seeing, walking, remembering, and hearing. School attendance of children with disabilities indicated that seeing difficulty was the most prevalent disability among school children, with a higher prevalence among females than males.

Gender dimensions in marriage showed that the proportion of never-married individuals has increased over time. A higher percentage of men were married compared to women, while a larger proportion of women were widowed. The median age at first marriage was higher for males compared to females, with variations based on factors such as place of residence, maternal marital status, and religious affiliation. Child marriages were observed to still be prevalent, especially among females, posing risks to their health and limiting their prospects.

Female-headed households tended to have less access to assets such as electronic communication/ICT devices and livestock compared to male-headed households, by observation. However, there are no gender differentials regarding ownership or access to land. These findings highlight disparities and challenges related to gender across various domains, including education, disability, marriage, and household assets. Addressing these issues is crucial for promoting gender equality and fostering inclusive development as prescribed by the SDGs, AADPD, Vision 2036 and RNPP.

It is proposed for further qualitative research to be conducted as it is essential in understanding the root causes of existing gender disparities from the findings. Alongside the already generated gender statistics, this would significantly provide meaningful insights into the differences found among men, women, boys and girls to achieve the goal of fostering Gender Equality and Inclusive Development.

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DISABILITY

COMPARATIVE ANALYSIS OF HOUSEHOLDS BY DISABILITY STATUS

Kago Kebotsamang

EXECUTIVE SUMMARY

People with disabilities are often prevented from participating fully in society due to economic and social barriers despite the government's efforts to address their needs. They continue to face discrimination and exclusion as a result of social, physical, and legislative barriers. This report analyzes data from the 2022 Botswana Population and Housing Census (PHC) to explore the characteristics of households with People with Disabilities (PWDs). Compared to households without PWDs, households with PWDs are larger in size, more likely to be female-headed, and generally have older members. They also experience higher multidimensional poverty deprivation, lacking access to education, employment opportunities, and basic amenities. The report highlights the challenges faced by households with PWDs and proposes policy considerations to address these issues. This includes social support programs, inclusive education initiatives, promoting employment for PWDs and caregivers, improving accessibility, and targeted poverty alleviation programs. The report concludes by suggesting areas for further research, such as exploring specific types of disabilities, and conducting qualitative studies to gain deeper insights. By implementing these recommendations and conducting further research, Botswana can create a more inclusive society for people with disabilities.

1. INTRODUCTION

1.1. Background

People with disabilities (PWDs) in Botswana face significant economic and social barriers that hinder their full participation in society. Despite government efforts, widespread discrimination, physical inaccessibility, and legislative gaps continue to limit their opportunities. Studies have shown a significant disconnect between the services offered to PWDs and their actual needs, resulting in dissatisfaction and a sense of marginalization (McKinney & Amosun, 2020).

Furthermore, the prevailing approach of many NGOs, which view PWDs as passive recipients of aid within a medical or charity model, reinforces their exclusion (Mukhopadhyay, 2015). This approach often frames PWDs as a "social burden" requiring welfare support, further perpetuating their marginalization, and hindering their economic participation (Mukhopadhyau and Moswela, 2019). Consequently, PWDs are more likely to experience poverty due to limited employment opportunities and social exclusion.

Given these challenges, the 2022 Botswana Population and Housing Census data presents a valuable opportunity to compare household characteristics of PWDs against those without PWDs at a national level. By analysing key factors like household composition, income levels, access to education and healthcare, and participation in the workforce, this study aims to shed light on the extent to which disability contributes to economic and social exclusion in Botswana.

By comparing household characteristics of people living with disabilities against those of people without disabilities, the 2022 Botswana Population and Housing Census data provides valuable insights into the challenges faced by people with disabilities. This information can be used to develop policies and programs that will help to improve the lives of people with disabilities and make Botswana a more inclusive society.

The findings would have important implications for Botswana's Vision 2036, the 2030 Sustainable Development Goals, and the Botswana Disability Policy. Vision 2036 aims to promote the full participation of people with disabilities in all aspects of society, and the 2030 Sustainable Development Goals aim to eradicate poverty, hunger, and inequality. To achieve these goals, Botswana needs to take steps to address the challenges faced by people living with disabilities. This includes providing them with access to education, employment, and other essential services. It also includes removing the barriers that prevent them from participating fully in society.

1.2. Objective of the analysis

This report focuses on comparing the living conditions of case households and control households in Botswana. It achieves this by examining the following three key aspects:

i. **Household Composition Variables:** This would delve into the makeup of case and control households, including factors like family size, age distribution, and presence of dependents.
ii. **Multidimensional Poverty Indicators:** The report explores various indicators reflecting the level of multidimensional poverty experienced by each household group.
iii. **Wealth Index:** This analysis utilizes a wealth index to compare the overall economic well-being of case and control households.

1.3. Definition of disability

Prior to the 2022 Population and Housing Census (PHC), Statistics Botswana relied on a traditional medical model definition of disability, primarily focusing on impairments in bodily functions or structures. This definition, which emphasized limitations or loss of body parts, sight, intellect, or speech, has been criticized by disability rights advocates, researchers, and scholars for being too narrow and neglecting the impact of social and environmental factors on disability (Eide & Mmatli, 2016).

To address these concerns, the 2022 Botswana PHC adopted a new definition based on the Washington Group Short Set on Functioning (WG-SS) questions. Developed and endorsed by the Washington Group on Disability Statistics (WG), these questions align with the 2001 World Health Organization's International Classification of Functioning, Disability, and Health (ICF) framework.

The ICF framework moves beyond the medical model by acknowledging disability as the complex interaction between:

- **Functional limitations:** Difficulties in performing basic activities like seeing, hearing, walking, self-care, and communication.

- **Environmental factors:** Physical and social barriers that hinder participation in society, such as inaccessible buildings, transportation systems, or negative attitudes.

By focusing on functional limitations and their impact on social participation, the WG-SS questions capture a broader range of individuals who may experience disability due to various factors, not just impairments alone. This shift in approach provides a more comprehensive understanding of disability and its impact on individuals' lives (Washington Group, 2020).

The WG-SS focuses on activity limitations in core domains – seeing, hearing, walking, communicating, remembering and self-care. It comprises of the following six questions for persons aged 5 years or older:

1. Does **(B02_NAME**) have difficulty in **seeing**, even when wearing glasses (for those who usually wear them)?
2. Does **(B02_NAME)** have difficulty in **Hearing**, even when using hearing aid (for those who usually use them)?
3. Does **(B02_NAME)** have difficulty with **Communicating** in his/her language (i.e. understanding others or being understood by others)?
4. Does **(B02_NAME)** have difficulty **Walking** or climbing stairs?
5. Does **(B02_NAME)** have difficulty in **Remembering** or concentrating?
6. Does **(B02_NAME)** have difficulty with **Self-care** such as washing all over, dressing, or feeding?

Each question has the following four response categories, which are read after each question:

1. No difficulty
2. Some difficulty
3. A lot of difficulty
4. Cannot do at all

The WG-SS questions employ a threshold approach. Individuals reporting at least "a lot of difficulty" in performing at least one of the six core activities are considered to have a disability. Households with at least one member identified as having a disability using this criterion will be categorized as "case households" for the purpose of this study. Conversely, households where no member reports at least "a lot of difficulty" in any of the core activities will be classified as "control households."

2. LITERATURE REVIEW

People with disabilities are a significant population group often facing social and economic marginalization. Understanding their living conditions compared to individuals without disabilities is crucial for promoting inclusive development policies. This review explores the literature on living conditions of PWDs in Sub-Saharan Africa (SSA), with a specific focus on Botswana.

Studies across SSA highlight a consistent pattern of disadvantage for PWDs. They often experience lower educational attainment, limited employment opportunities, and higher poverty rates compared to the non-disabled population (Chitiyo, 2021; Naami, 2015). Physical barriers, discriminatory attitudes, and lack of accessible infrastructure further restrict their participation in society (World Health Organisation, 2011).

The concept of multidimensional poverty goes beyond income, encompassing deprivations in health, education, and living standards (Alkire & Foster, 2011). Research suggests a strong association between disability and multidimensional poverty in SSA. A study by Pinilla-Roncancio, et al. (2020) found that PWDs were more likely to be multidimensionally poor compared to the non-disabled population in Cameroon. This suggests that disability creates a complex web of challenges that impact various aspects of well-being.

Botswana, a middle-income country in SSA, has made strides in economic development. However, concerns remain regarding the inclusion of PWDs. A report by Eide and Mmatli (2016) utilizing a national survey data found that households with disabled members scored lower on living standards compared to those without. This included limited access to basic necessities such as sanitation and safe drinking water. The study also highlighted lower education attainment among PWDs in Botswana. The Botswana National Strategic Development Plan (2017-2023) acknowledges the need to address these disparities in order to improve inclusivity.

The 2022 Census data offers a detailed snapshot of the population, allowing policymakers to identify geographic disparities and specific needs within the PWD community. This information can then be used to develop targeted interventions and allocate resources more effectively. By leveraging the 2022 census data, Botswana can take significant steps towards creating a more inclusive society that empowers PWDs to reach their full potential.

3. METHODOLOGY

This section presents the methods used to compute prevalence rates of disability at household levels and other useful indicators used to compare households. More specifically, this report aims to compare households of different disability status by multidimensional poverty indicators and wealth index.

3.1. Outcome variable

A key definition of this report is the classification of a household by disability status. Individuals reporting at least "a lot of difficulty" in performing at least one of the six core activities WG-SS questions are considered to have a disability. Therefore, hhouseholds with at least one member identified as having a disability using this criterion is classified as a **case household**. Otherwise, if there is no household member that reports at least "a lot of difficulty" in any of the core activities then such a household is classified as a **control household**. That is, a case household is a household with at least one individual with disability while a control household has no individual with disability.

3.2. Household composition

Household composition is investigated using the following variables:

i. Sex of the household head, in particular, the proportion of female headed households between case households and control households.
ii. Household size
iii. Number of dependents in a household. A dependent is any individual aged less than 16 or 65 years and older.
iv. Mean household age.

3.3. Multidimensional poverty indicators

A national multidimensional poverty index (MPI) serves as a crucial indicator for monitoring progress towards achieving the first Sustainable Development Goal (SDG) of the 2030 Agenda: eradicating poverty in all its forms. Therefore, comparing case and control households based on the MPI is a highly relevant approach.

Botswana recently adopted a national Multidimensional Poverty Index (MPI) in 2021. This builds on the global MPI but adds a new dimension: social inclusion (including employment and civil registration). This tailored MPI allows Botswana to track progress in tackling various hardships faced by the poor (Office of the President, 2021). However, not all data for the national MPI can be obtained from the census. **Table 3.1** details the accessible MPI indicators used to compare households based on disability status, along with how these indicators were calculated.

While some experts recommend calculating the MPI even with missing indicators (Alkire et al., 2023), this report opted against it. According to the Pilot National MPI Report (Office of the President, 2021), food security is one of most significant factors contributing to the national MPI. It accounts for 18% of the national MPI and therefore excluding such a crucial indicator could lead to inconsistent results from the previous MPI results.

TABLE 3.1: Dimension and selected indicators of the Botswana National MPI

DIMENSION	INDICATOR	DEFINITION
EDUCATION	SCHOOL ATTENDANCE	A household is deprived of school attendance if any child aged 6 – 18 years is not enrolled in school
	SCHOOL ATTAINMENT	A household is deprived if at least one household member aged 16 years or above has less than 7 years of primary education
	COMPUTER USAGE	Deprived if no member of a household has used a computer in the last 3 months.
HEALTH	CHILD MORTALITY	Deprived if any child has died in the family in the five-year period preceding the survey
SOCIAL INCLUSION	EMPLOYMENT	Deprived if all household members in the labour force are unemployed.
	CIVIL REGISTRATION	Deprived if no one in the household has a birth certificate or national identity card.
LIVING STANDARDS	ELECTRICITY	Deprived if household is not connected to the electrical grid.
	WATER	Deprived if household gets drinking water from unclean source or it takes 30 minutes or more to collect water, round trip.
	SANITATION	Deprived if household has no toilet facilities, open pit latrine or other OR has a shared toilet.
	HOUSING	Deprived if household uses inadequate flooring or walls.
	ASSESTS	The household does not own more than one of these assets: radio, TV, telephone, computer, animal cart, bicycle, motorbike or refrigerator, and does not own a car or truck.

3.4. Wealth index

A wealth index would be used as the main indicator to compare household with PWDs against households without PWDs. The wealth index is not an absolute measure of poverty or wealth, but an indicator that ranks households relative to each other by dividing them into five quintiles based on their wealth ranks (Rutstein and Johnson, 2004).

The wealth index computed in this report is based on the following factors from the census questionnaire.

- Livestock ownership.
- Access to land used for planting.
- Type and tenure of housing unit.
- Wall, floor, and roof materials.
- Source of energy for cooking and heating.
- Type of drinking water source.
- Toilet facilities and refuse disposal.
- Ownership of common durables like televisions and cars.
- Number of household members per sleeping room.

Each household asset for which information was collected was converted to a binary variable then assigned a weight or factor score generated through principal components analysis. The resulting asset scores were standardized in relation to a standard normal distribution with a mean of zero and a standard deviation of one. These standardized scores were then used to create the break points that define wealth quintiles as: Poor, Lower Middle, Middle, Upper Middle, and Rich.

4. FINDINGS

The results from the 2001 and 2011 Population and Housing Census show that the prevalence rate of disability in Botswana were both about 3%, 2.99 % and 2.92% respectively. However, the definition of disability then was different from the one adopted for this paper. It is therefore difficult to compare the findings of the 2022 Botswana PHC with the findings from the previous censuses. Instead, this paper focuses on comparing households with PWDs against households without PWDs.

A total of 55,344 (2.58%) individuals aged 5 years or older were identified to have some disability according to the WG-SS definition, from the 2022 Botswana PHC. These individuals come from a total of 29,562 (4.25%) households which translates to an average of about two (1.87) PWDs per household. As a result, it is imperative to investigate the characteristics of household with PWDs compared to household without PWDs given that the average household size from the 2022 Botswana PHC is found to be 3.27 individuals per household.

4.1. Data

The analysis that follows are based on Section A and Section E of the PHC questionnaire: Section A collects individual data, while Section E gathers household-level information. These two datasets were merged to conduct comparative analysis between case and control households. However, a slight discrepancy was observed between the numbers of households identified in each section.

While Section A reported 699,385 households, Section E listed 697,245. This discrepancy resulted in 6,357 households in Section A lacking corresponding data in Section E, and 4,217 households in Section E not being linked to the individual data in Section A. The analysis then proceeded with the 694,783 households successfully merged across both datasets. This represents 99.3% and 99.6% of all households identified in Section A and listed in Section E respectively.

4.2. Household composition

4.2.1. Sex of head of household

Table 4.1 below presents a distribution of sex of head of household by type of household and locality type. It shows that over half of households with PWDs are headed by females across all the localities. This in contrasts with households without PWDs where more than half of the households are headed by males.

TABLE 4.1 Distribution of sex of household head by household disability status and type of locality; 2022 Botswana PHC.

TYPE OF LOCALITY	SEX OF HOUSEHOLD HEAD	HOUSEHOLD DISABILITY STATUS			TOTAL
		CONTROL	CASE	NOT STATED	
TOWN	Female	43,844 **(40.3%)**	1,725 **(53.3%)**	15,824 **(41.9%)**	**61,393 (41.0%)**
	Male	63,514 **(58.4%)**	1,482 **(45.8%)**	21,017 **(55.7%)**	**86,013 (57.4%)**
	No Head	1,427 **(1.3%)**	29 **(0.9%)**	899 **(2.4%)**	**2,355 (1.6%)**
URBAN-VILLAGE	Female	83,738 **(41.4%)**	7,263 **(58.9%)**	53,692 **(52.8%)**	**144,693 (45.8%)**
	Male	114,128 **(56.5%)**	4,882 **(39.6%)**	44,440 **(43.7%)**	**163,450 (51.7%)**
	No Head	4,164 **(2.1%)**	194 **(1.6%)**	3,622 **(3.6%)**	**7,980 (2.5%)**
RURAL	Female	46,912 **(34.0%)**	7,067 **(52.1%)**	41,990 **(54.2%)**	**95,969 (41.9%)**
	Male	88,722 **(64.3%)**	6,358 **(46.9%)**	32,953 **(42.6%)**	**128,033 (55.9%)**
	No Head	2,286 **(1.7%)**	144 **(1.1%)**	2,467 **(3.2%)**	**4,897 (2.1%)**
TOTAL	Female	174,494 **(38.9%)**	16,055 **(55.1%)**	111,506 **(51.4%)**	**302,055 (43.5%)**
	Male	266,364 **(59.4%)**	12,722 **(43.7%)**	98,410 **(45.4%)**	**377,496 (54.3%)**
	No Head	7,877 **(1.8%)**	367 **(1.3%)**	6,988 **(3.2%)**	**15,232 (2.2%)**

4.2.2. Household size

The distribution of average household size for case and control households by districts is presented in **Table 4.2** below. At national level, the average household size for households with IWDs was found to be 3.3 compared to an average household size of 2.3 for control households while the not stated households have a large average household size of 5.5.

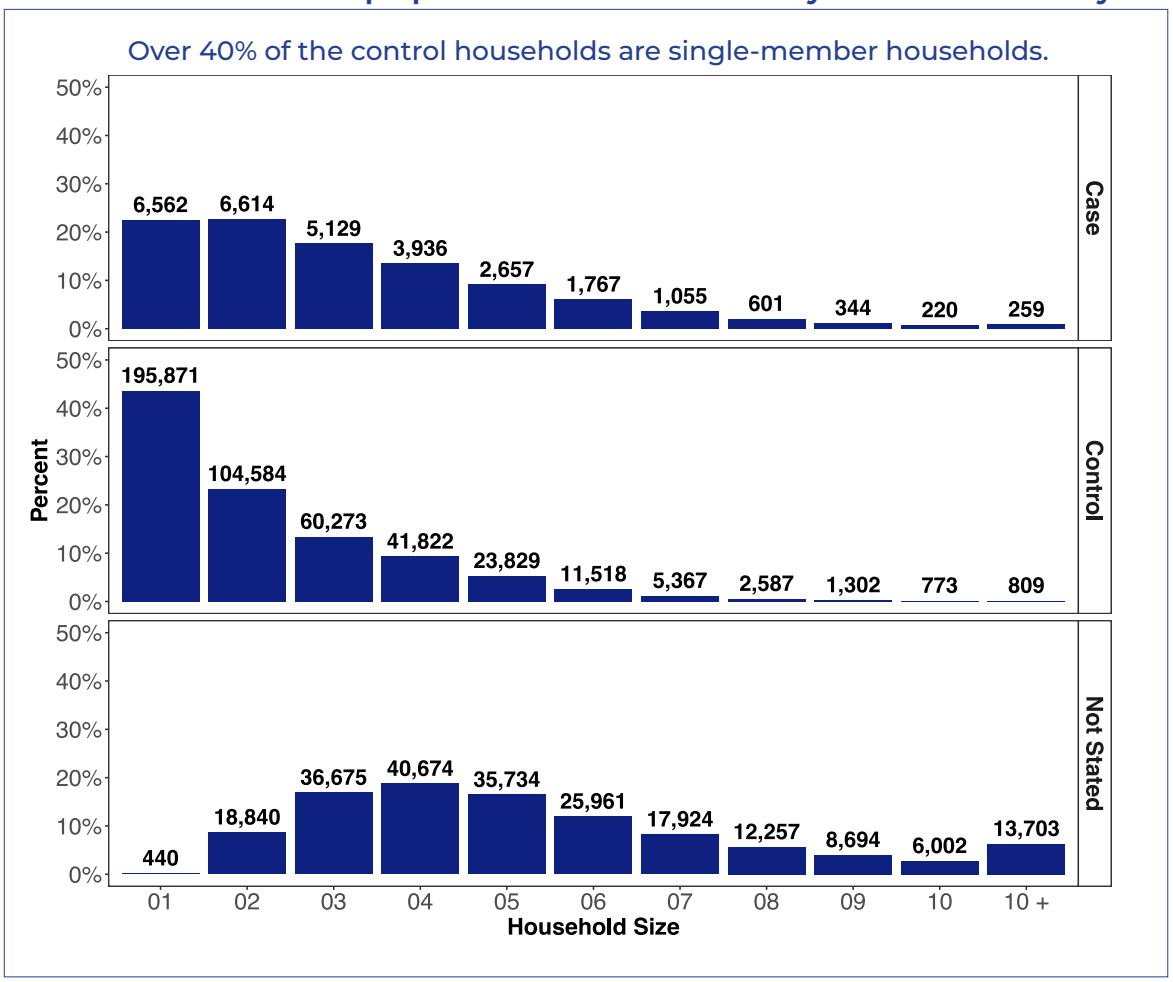
This trend, where case households have a higher mean household size compared to the control households, was persistent across all districts expect for the CKGR district. In CKGR, the mean household size for the case households was two individuals per household compared to the average household size of 3.3 for the control households. However, the households which could not be determined if they have at least one IWD, had a large average household size across all districts compared to the case and control households.

TABLE 4.2 Distribution of average household size by household disability status and district; 2022 Botswana PHC.

DISTRICT	HOUSEHOLD DISABILITY STATUS			TOTAL
	CONTROL	CASE	NOT STATED	
Gaborone	2.3	3.3	4.5	**2.9**
Francistown	2.2	3.3	4.8	**3.0**
Lobatse	2.2	3.3	4.9	**3.0**
Selibe Phikwe	2.4	3.3	4.8	**3.1**
Orapa	2.2	4.0	4.6	**2.8**
Jwaneng	2.1	3.2	4.4	**2.7**
Sowa	2.0	2.5	4.5	**2.6**
Southern	2.4	3.4	5.9	**3.7**
Barolong	2.3	3.1	5.8	**3.5**
Ngwaketse West	2.2	3.1	6.0	**3.6**
South-East	2.3	3.4	5.1	**3.0**
Kweneng East	2.3	3.5	5.3	**3.3**
Kweneng West	2.1	3.2	6.0	**3.6**
Kgatleng (Wards)	2.4	3.3	5.5	**3.3**
Central Serowe -Palapye	2.3	3.4	5.8	**3.5**
Central Mahalapye	2.2	3.2	5.9	**3.6**
Central Bobonong	2.2	3.1	5.7	**3.5**
Central Boteti	2.2	3.6	5.8	**3.5**
Central Tutume	2.3	3.0	5.7	**3.5**
North-East	2.2	3.1	5.3	**3.3**
Ngamiland East	2.4	3.4	6.0	**3.8**
Ngamiland West	2.3	3.3	6.2	**4.1**
Chobe	1.9	2.8	4.8	**2.7**
Delta	2.3	3.0	9.9	**5.9**
Ghanzi	2.2	3.1	5.9	**3.6**
CKGR	3.3	2.0	6.6	**4.5**
Kgalagadi South	2.2	3.3	5.9	**3.6**
Kgalagadi North	2.1	3.1	5.4	**3.2**
TOTAL	**2.3**	**3.3**	**5.5**	**3.3**

Figure 4.1 below presents the distribution of proportion of household sizes by household disability status. Over 40.0 % of control households consist of just one person, compared to around 20.0 % of case households. For case households, the proportion of households with 1 to 3 members stays relatively constant, ranging from 17.6 % to 22.7%. In contrast, the proportion of control households with these sizes declines rapidly from 43.6 % to 13.4 over the same range of household sizes.

FIGURE 4.1. Distribution of the proportion of household sizes by household disability status



4.2.3. Mean household age

Table 4.3 below presents the distributions of mean household age by district and household disability status. On average, case households have older members compared to control households. The national average for case households is 46.9 years old, while for control households it's 36.1 years old. This could possibly imply that individuals with disabilities might be older, increasing the average household age in case households.

TABLE 4.3 Distribution of average mean household age by household disability status and district; 2022 Botswana PHC

DISTRICT	HOUSEHOLD DISABILITY STATUS			TOTAL
	CONTROL	CASE	NOT STATED	
Gaborone	33.6	39.3	23.7	**31.4**
Francistown	33.3	38.8	22.2	**30.3**
Lobatse	34.1	41.3	23.2	**31.4**
Selibe Phikwe	33.7	40.6	22.3	**30.5**
Orapa	32.9	33.0	22.2	**30.2**
Jwaneng	34.1	36.3	24.0	**31.5**
Sowa	33.5	34.4	23.1	**30.8**
Southern	39.3	49.9	25.2	**35.0**
Barolong	39.5	49.4	25.1	**35.3**
Ngwaketse West	37.9	48.4	23.7	**33.7**
South East	34.0	43.7	24.3	**31.9**
Kweneng East	35.0	45.1	23.8	**32.0**
Kweneng West	38.3	48.7	23.7	**33.9**
Kgatleng (Wards)	38.0	49.4	24.5	**34.4**
Central Serowe -Palapye	37.8	49.2	24.2	**33.9**
Central Mahalapye	39.8	49.4	24.4	**35.1**
Central Bobonong	40.4	50.3	24.4	**35.3**
Central Boteti	35.1	46.5	22.5	**31.3**
Central Tutume	38.6	50.1	23.3	**33.9**
North East	38.6	50.1	23.9	**34.2**
Ngamiland East	34.3	45.9	23.0	**30.6**
Ngamiland West	35.9	46.4	22.1	**30.2**
Chobe	34.8	44.4	22.4	**31.8**
Delta	40.4	54.9	25.3	**35.0**
Ghanzi	35.1	43.9	23.5	**31.3**
CKGR	40.3	73.6	26.0	**37.2**
Kgalagadi South	36.4	44.7	24.0	**32.7**
Kgalagadi North	37.0	48.3	24.5	**33.7**
TOTAL	**36.1**	**46.9**	**23.7**	**32.7**

Although most of the average age difference between case and control households is about 10 years, the gap varies across districts. CKGR district shows the most significant difference, with control households at 40.3 years old on average and case households at 73.6 years. Orapa and Sowa districts has the smallest differences, with control households at 32.9 and 33.5 years, compared to the case households at 33.0 and 34.4 years respectively. This should be expected in Orapa and Sowa towns since these are mining towns which are generally occupied by the working class. Similar smaller age difference of 2.2 years is also observed at Jwaneng, another mining town.

The Not stated category, households with no disabilities data, have the lowest average age across all districts. This implies that most of these households are owned by younger generation which typically would not have answered the disability questions.

4.2.4. Number of dependents

The distribution of average number of dependents, individuals aged less than 15 years or 65 years and above, by type of household and districts is presented in **Table 4.4 below**. The table suggests a trend where households with at least one person with a disability (case households) tend to have a higher average number of dependents compared to households without disabilities (control households). This difference is present across all the districts except for Sowa town where control household average number of dependents is 0.45 compared to 0.29 for the case households.

People with disabilities might require more care, leading to a higher number of dependents in the household. These dependents could be family members who help or hired caregivers. Families with a member with a disability might be more likely to have extended family members living with them for support, increasing the number of dependents.

TABLE 4.4. Distribution of average number of dependent (aged < 15 or aged 65+) household members by type of household and district; 2022 Botswana PHC

DISTRICT	TYPE OF HOUSEHOLD (DEPENDENTS)			TOTAL
	CONTROL	CASE	NOT STATED	
Gaborone	0.42	0.92	1.81	**0.75**
Francistown	0.49	1.14	2.09	**0.96**
Lobatse	0.51	1.14	2.14	**0.97**
Selibe Phikwe	0.64	1.27	2.23	**1.12**
Orapa	0.59	1.50	2.11	**0.97**
Jwaneng	0.43	0.99	1.76	**0.78**
Sowa	0.45	0.29	1.85	**0.81**
Southern	0.73	1.50	2.89	**1.51**
Barolong	0.70	1.46	2.99	**1.54**
Ngwaketse West	0.63	1.30	3.07	**1.52**
South East	0.46	1.16	2.10	**0.89**
Kweneng East	0.52	1.33	2.38	**1.11**
Kweneng West	0.59	1.43	3.03	**1.51**
Kgatleng (Wards)	0.59	1.29	2.46	**1.18**
Central Serowe -Palapye	0.66	1.55	2.90	**1.44**
Central Mahalapye	0.68	1.53	3.06	**1.55**
Central Bobonong	0.70	1.48	3.01	**1.54**
Central Boteti	0.59	1.57	2.93	**1.39**
Central Tutume	0.75	1.45	2.98	**1.57**
North East	0.73	1.52	2.73	**1.42**
Ngamiland East	0.62	1.36	2.81	**1.46**
Ngamiland West	0.69	1.42	3.22	**1.87**
Chobe	0.40	1.06	2.23	**0.90**
Delta	0.44	0.95	4.35	**2.31**
Ghanzi	0.53	1.17	2.61	**1.32**
CKGR	1.11	1.17	3.06	**1.88**
Kgalagadi South	0.58	1.36	2.89	**1.42**
Kgalagadi North	0.52	1.31	2.52	**1.20**
TOTAL	**0.58**	**1.37**	**2.62**	**1.25**

4.3. Multidimensional Poverty and Disability

This section presents the results on some of the multidimensional poverty indicators by household disability status.

4.3.1. Education

Education forms the first dimension of poverty assessed by school attendance and attainment, and computer knowledge.

(a) School attendance

A household is deprived of school attendance if any child aged 6 – 18 years is not enrolled in school. **Table 4.5** below presents the distribution of school attendance deprivation by household disability status and locality. It shows that household with PWDs have a higher school attendance deprivation compared to the households without PWDs across the different localities. Furthermore, rural areas have the highest proportion of households (8.8%) with children deprived school followed by urban-villages then last cities and towns have about 4.0 % of household with children not attending school.

TABLE 4.5 Distribution of households deprived of school attendance by household disability status and type of locality; 2022 Botswana PHC.

TYPE OF LOCALITY	HOUSEHOLD DISABILITY STATUS			TOTAL
	CONTROL	CASE	NOT STATED	
Town	3,170 **(2.9%)**	229 **(7.1%)**	2,478 **(6.6%)**	5,877 **(3.9%)**
Urban-Village	8,316 **(4.1%)**	1,025 **(8.3%)**	11,301**(11.1%)**	20,642 **(6.5%)**
Rural	6,879 **(5.0%)**	1,235 **(9.1%)**	12,064 **(15.6%)**	20,178 **(8.8%)**
TOTAL	18,365 **(4.1%)**	2,489 **(8.5%)**	25,843 **(11.9%)**	**46,697 (6.7%)**

(b) School attainment

The last indicator of education deprivation is based on computer usage. A household is deprived of computer use if there is no household member who have used a computer in the last 12 months. However, the census questionnaire used last 3 months instead of 12. Therefore, the computer usage deprivation computed in this paper should be used cautiously. **Table 4.6** below presents the distribution of households deprived of computer usage by household disability status and locality.

TABLE 4.6 Distribution of households deprived of school attainment by household disability status and type of locality; 2022 Botswana PHC

TYPE OF LOCALITY	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Town	1,099 **(34.0%)**	8,955 **(8.2%)**	4,478 **(11.9%)**	14,532 **(9.7%)**
Urban-Village	7,309 **(59.2%)**	34,038 **(16.8%)**	29,456 **(28.9%)**	70,803 **(22.4%)**
Rural	10,403 **(76.7%)**	52,863 **(38.3%)**	38,994 **(50.4%)**	102,260 **(44.7%)**
TOTAL	18,811 **(64.5%)**	95,856 **(21.4%)**	72,928 **(33.6%)**	187,595 **(27.0%)**

(c) Computer usage

The last indicator of education deprivation is based on computer usage. A household is deprived of computer use if there is no household member who have used a computer in the last 12 months. However, the census questionnaire used last 3 months instead of 12. Therefore, the computer usage deprivation computed in this paper should be used cautiously. **Table 4.7** below presents the distribution of households deprived of computer usage by household disability status and locality.

TABLE 4.7 Distribution of households deprived of computer usage by household disability status and type of locality; 2022 Botswana PHC

TYPE OF LOCALITY	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Town	1,393 **(43.0%)**	38,599 **(35.5%)**	3,274 (**8.7%**)	43,266 **(28.9%)**
Urban-Village	7,411 **(60.1%)**	94,595 **(46.8%)**	11,491 **(11.3%)**	113,497 **(35.9%)**
Rural	11,179 **(82.4%)**	102,826 **(74.6%)**	13,511 **(17.5%)**	127,516 **(55.7%)**
Total	19,983 **(68.6%)**	236,020 **(52.6%)**	28,276 **(13.0%)**	284,279 **(40.9%)**

A total of 284,279 (40.9%) households were found to be deprived of computer use during the 2022 Botswana PHC, with rural and households with PWDs mostly affected. A total of 19,983 (68.6%) households among those with IWDs are deprived of computer use compared to 52.6 percent of household without IWDs which are deprived of computer use.

4.3.2. Social inclusion

Social inclusion is based on the following two indicators:

a) **Employment** – deprived if all household members in the labour force are unemployed.
b) **Civil registration** – deprived if no one in a household has a birth certificate or a national identity card.

(a) Employment

Table 4.8 below presents the distribution of household deprived of employment by household disability status and type of locality. A total of 71,450 (10.3%) households were found to have all household members in labour force being unemployed. The case households were better off compared to the control households in terms employment deprivation, about 10.0 percent of the case households were deprived of employment compared to about 15.0 percent of the control households. The rural areas were also the most affected by employment deprivation irrespective of the household disability status.

TABLE 4.8 Distribution of households deprived of employment by household disability status and type of locality; 2022 Botswana PHC

TYPE OF LOCALITY	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Town	318 **(9.8%)**	10,984 **(10.1%)**	8 **(0.0%)**	11,310 **(7.6%)**
Urban-Village	1,200 **(9.7%)**	30,579 **(15.1%)**	19 **(0.0%)**	31,798 **(10.1%)**
Rural	1,499 **(11.0%)**	26,820 **(19.4%)**	23 **(0.0%)**	28,342 **(12.4%)**
TOTAL	3,017 **(10.4%)**	68,383 **(15.2%)**	50 **(0.0%)**	71,450 **(10.3%)**

4.3.3. Living standards

The living standards dimension has a higher weight than other dimensions since it is considered the ultimate yardstick for determining poverty status of a household (Office of the President, 2021). A total of four indicators, instead of six, were considered in this paper. These are presented below:

a) **Electricity** – a household is deprived if it is not connected to national grid.
b) **Water** – deprived if a household gets drinking water from an uncleaned source.
c) **Sanitation** – a household is deprived is has no toilet facility or uses a shared facility.
d) **Housing** – deprived if a household's main house has inadequate floors or walls.
e) **Asset** – deprived if a household does not own more than one of these assets: radio, TV, telephone, computer, donkey cart, bicycle, motorbike, or refrigerator, and does not own a car or truck.

The other indicator, food security deprivation, could not be assessed due to lack of relevant data from the census questionnaire.

(a) Electricity

Table 4.9 below presents a distribution of households deprived of national grid electricity by household disability status and type of locality. Household with IWDs were once again worse-off than their control counterparts. A total of 10,907 (37.4%) households are deprived of electricity among the case households compared to a total of 111,259 (25%) of the control households. This trend persisted across the different localities.

TABLE 4.9 Distribution of households deprived of electricity by household disability status and type of locality; 2022 Botswana PHC

TYPE OF LOCALITY	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Town	481 **(14.9%)**	9,342 **(8.6%)**	3,119 **(8.3%)**	12,942 **(8.6%)**
Urban-Village	2,095 **(17.0%)**	20,674 **(10.2%)**	13,156 **(12.9%)**	35,925 **(11.4%)**
Rural	8,331 **(61.4%)**	82,243 **(59.6%)**	45,110 **(58.3%)**	135,684 **(59.3%)**
TOTAL	10,907 **(37.4%)**	112,259 **(25.0%)**	61,385 **(28.3%)**	184,551 **(26.6%)**

(b) Clean water

Table 4.10 below presents a distribution of households deprived of clean water by household disability status and type of locality. A total of 16,204 (2.3%) households are deprived of clean water with households found in the rural areas being the most affected. The proportions case households which are deprived of clean water are relatively similar to the proportions of the control households across the different localities.

TABLE 4.10 Distribution of households deprived of clean water by household disability status and type of locality; 2022 Botswana PHC

TYPE OF LOCALITY	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Town	27 **(0.8%)**	2,078 **(1.9%)**	689 **(1.8%)**	2,794 **(1.9%)**
Urban-Village	85 **(0.7%)**	1,202 **(0.6%)**	723 **(0.7%)**	2,010 **(0.6%)**
Rural	678 **(5.0%)**	7,405 **(5.4%)**	3,317 **(4.3%)**	11,400 **(5.0%)**
TOTAL	790 **(2.7%)**	10,685 **(2.4%)**	4,729 **(2.2%)**	16,204 **(2.3%)**

(c) Sanitation deprivation

Table 4.11 below present the distribution of households deprived of sanitation (toilet facility) by household disability status and type of locality. A total of 270,657 (39.0%) households either had no toilet facility or shared a toilet facility. However, and in contrast to the previous indicators, the case households were better off compared to the control households in terms of sanitation deprivation. A total of 9,489 (32.6%) case households were deprived of sanitation compared to 184,525 (41.1%) of control households. The other contradictory observation is that urban-villages (32.8%) had the lowest proportion of household with sanitation deprivation compared to the town/cities (41.1%) and rural villages (46.1%).

TABLE 4.11 Distribution of households deprived of electricity by household disability status and type of locality; 2022 Botswana PHC

TYPE OF LOCALITY	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Town	1,260 **(38.9%)**	46,859 **(43.1%)**	13,401 **(35.5%)**	61,520 **(41.1%)**
Urban-Village	2,764 **(22.4%)**	72,397 **(35.8%)**	28,531 **(28.0%)**	103,692 **(32.8%)**
Rural	5,465 **(40.3%)**	65,269 **(47.3%)**	34,711 **(44.8%)**	105,445 **(46.1%)**
TOTAL	9,489 **(32.6%)**	184,525 **(41.1%)**	76,643 **(35.3%)**	270,657 **(39.0%)**

(d) Housing

Table 4.12 below presents a distribution of households deprived of quality housing by household disability status and type of locality. A total of 90,965 (13.1%) households were found to be deprived of quality housing. Among the case households, 4,673 (16.0%) were deprived compared to 56,307 (12.5%) of the control households. The mostly affected household were from the rural areas with 30.9 percent the household deprived of quality housing compared to 4.6 percent and 3.9 percent of households in urban-villages and towns/cities, respectively.

TABLE 4.12 Distribution of household deprived of quality housing by household disability status and type of locality; 2022 Botswana PHC

TYPE OF LOCALITY	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Town	136 **(4.2%)**	4,307 **(4.0%)**	1,326 **(3.5%)**	5,769 **(3.9%)**
Urban-Village	619 **(5.0%)**	8,433 **(4.2%)**	5,357 **(5.3%)**	14,409 **(4.6%)**
Rural	3,918 **(28.9%)**	43,567 **(31.6%)**	23,302 **(30.1%)**	70,787 **(30.9%)**
TOTAL	4,673 **(16.0%)**	56,307 **(12.5%)**	29,985 **(13.8%)**	90,965 **(13.1%)**

(e) Assets

Table 4.13 below present a distribution of household deprived of assets by household disability status and type of locality. A total of 191,271 (27.5%) households were found to be deprived of assets in Botswana. Case households (36.2%) were mostly affected compared to the control households (27.2%) and unidentified households (26.9%). In addition, the households in the rural villages (45.4%) were worse-off compared to the households in towns (17.2%) and urban villages (19.5%).

TABLE 4.13 . Distribution of households deprived of assets by household disability status and type of locality; 2022 Botswana PHC

TYPE OF LOCALITY	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Town	672 **(20.8%)**	20,713 **(19.0%)**	4,397 **(11.7%)**	25,782 **(17.2%)**
Urban-Village	3,040 **(24.6%)**	40,414 **(20.0%)**	18,107 **(17.8%)**	61,561 **(19.5%)**
Rural	6,837 **(50.4%)**	61,321 **(44.5%)**	35,770 **(46.2%)**	103,928 **(45.4%)**
TOTAL	10,549 **(36.2%)**	122,448 **(27.3%)**	58,274 **(26.9%)**	191,271 **(27.5%)**

4.3.4. Health

The health dimension consists of four indicators:

a) **Nutrition** – a household is deprived if any child under 5 in the household is stunted, wasted, or underweight OR any child 5-17 has low BMI-by-age.
b) **Child mortality** – deprived if any child has died in the family in the five-year period preceding the survey.
c) **Maternal care** – a household is deprived if any woman 12-49 in the household who gave birth in the last 5 years did not have pre- or post-natal care or assisted delivery.
d) **Access/distance** to health services.

However, only the child mortality indicator can be derived from the Botswana census data. **Table 4.14** below presents a distribution of households with child mortality deprivation by household disability status and type of locality. The data shows that this is least deprived indicator across the different households in Botswana. In addition, there are not much difference between household by disability status nor by locality.

TABLE 4.14 . Distribution of households deprived by child mortality by household disability status and type of locality; 2022 Botswana PHC

TYPE OF LOCALITY	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Town	7 **(0.2%)**	74 **(0.1%)**	51 **(0.1%)**	132 **(0.1%)**
Urban-Village	26 **(0.2%)**	251 **(0.1%)**	307 **(0.3%)**	584 **(0.2%)**
Rural	25 **(0.2%)**	170 **(0.1%)**	316 **(0.4%)**	511 **(0.2%)**
TOTAL	58 **(0.2%)**	495 **(0.1%)**	674 **(0.3%)**	1,227 **(0.2%)**

4.4. Agriculture and Disability

This section presents a comparison between households with IWD and households without disability by different agricultural variables measured in the census data. The following variables were used to compare agricultural output of the two households.

a) Whether a household owns any type of livestock.
b) Types of livestock owned a household.
c) Whether a household has access to land used for farming.
d) Whether a household has planted any crops in the previous years.
e) Types of crops planted by a household.

4.4.1. Livestock ownership

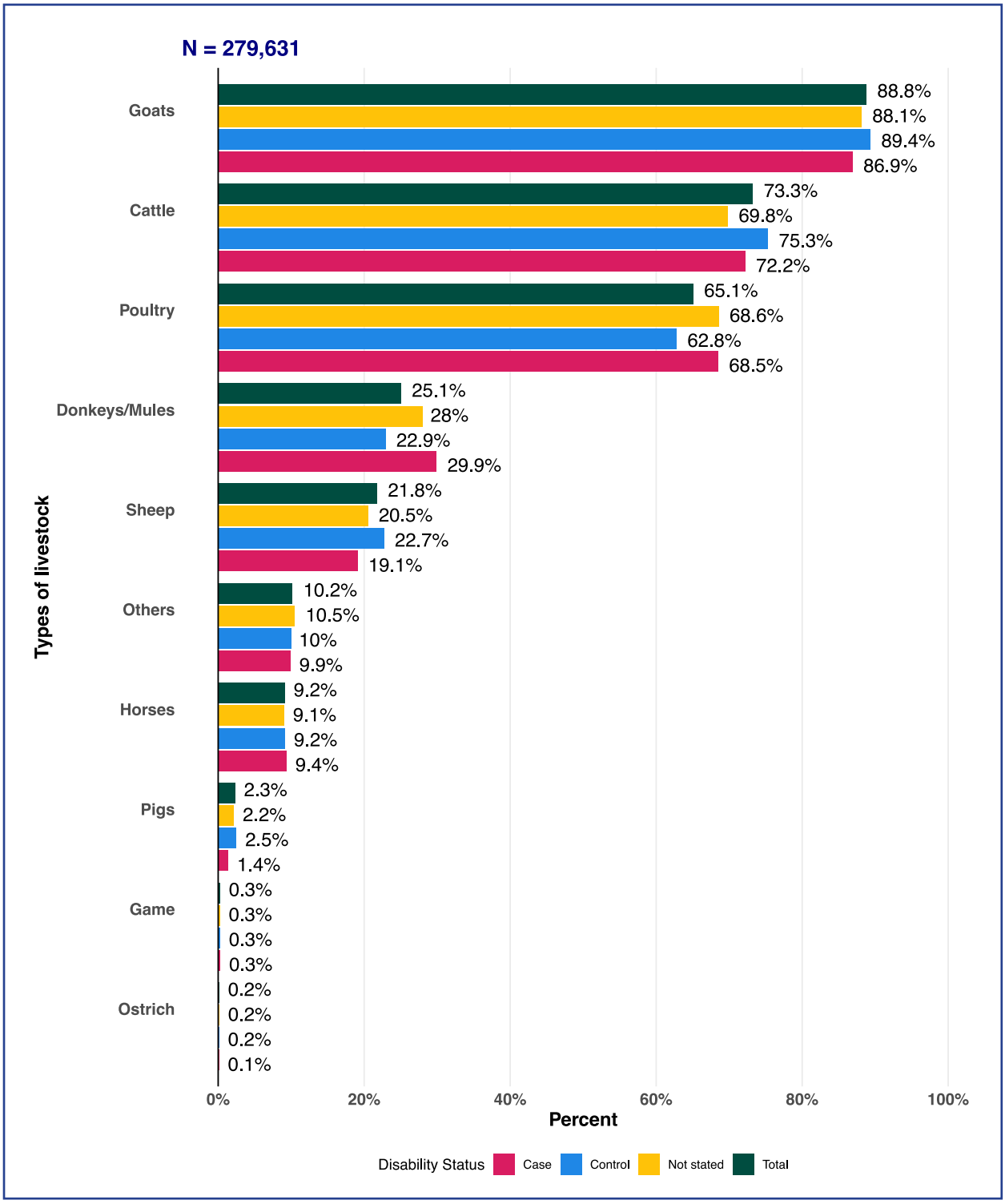
Table 4.15 below presents a distribution of livestock ownership by household disability status. Nationally, nearly 30% (203,382 households) reported owning livestock, while 11.0 percent (76,249) both owned and looked for it. Households with disabilities showed higher livestock ownership (either owning or both owning and looking after livestock). Nearly half (48.1%) of case household have livestock ownership compared to 37.8 percent of control households. The rate of livestock ownership for households with unreported disability status was around 44.0 percent.

Table 15 Distribution of livestock ownership by household disability status; 2022 Botswana PHC

LIVESTOCK OWNERSHIP	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Own	9,183 **(31.5%)**	126,634 **(28.2%)**	67,565 **(31.1%)**	203,382 **(29.3%)**
Look After	753 **(2.6%)**	20,563 **(4.6%)**	6,235 **(2.9%)**	27,551 **(4.0%)**
Both own and Look after	4,833 **(16.6%)**	43,190 **(9.6%)**	28,226 **(13.0%)**	76,249 **(11.0%)**
No	14,375 **(49.3%)**	258,348 **(57.6%)**	114,878 **(53.0%)**	387,601 **(55.8%)**
TOTAL	29,144 **(100.0%)**	448,735 **(100.0%)**	216,904 **(100.0%)**	694,783 **(100.0%)**

Figure 4.2 below presents a distribution of proportions of households who owns livestock for different animals by household disability status. A total of 279,631 households were found to either own or both own and look after some livestock and the proportions are relative to these. There was not much difference between the case and control households across different animals owned by households.

FIGURE 4.2. Distribution of proportion of households who own different animals by household disability status; 2022 Botswana PHC. The denominator is the number of all households which own or both own and look after livestock.



Goats, cattle, and poultry were the most popularly owned animals across different households. About 90.0 percent of control households who owned any livestock kept goats compare to 87.0 percent of the case households. Similarly, about three quarters of the control households who owned any livestock kept cattle while 72.2 percent of the case households. Game and ostriches were the least kept animals with less than 0.2 percent of the households across disability status keeping them.

4.4.2. Planting

Table 4.16 below presents a distribution of household with access to land used for planting crops by household disability status. About 35.0 percent of households reported that they have access to land used for planting crops during the 2022 Botswana PHC. In contradiction to most of the indicators/variables discussed above, case households outperform their control counterparts with half of them having access to planting land compared to about a third of the control households. The rate of access to planting land for households with unreported disability status was around 40.0 percent.

Table 15 Distribution of livestock ownership by household disability status; 2022 Botswana PHC

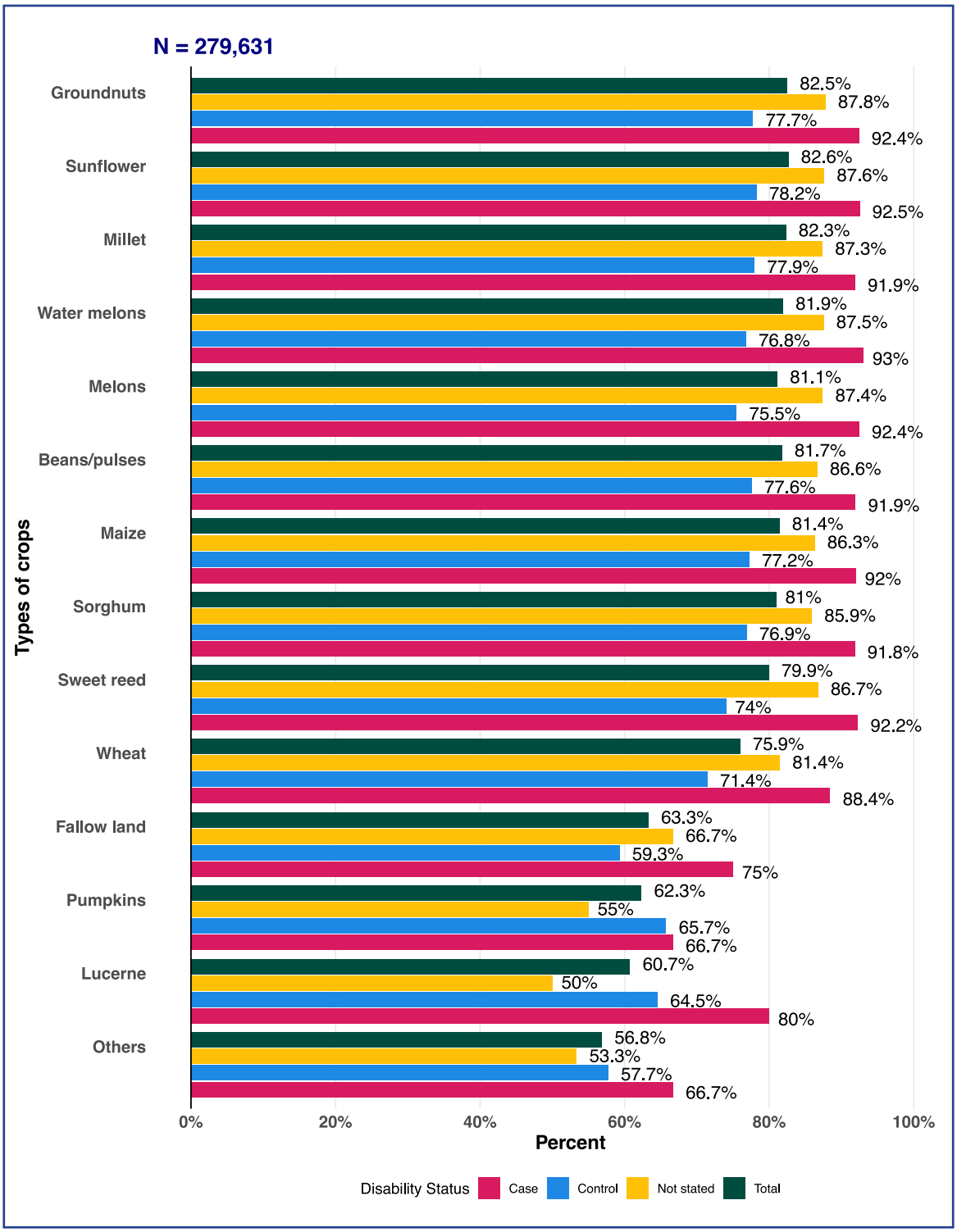
ACCESS TO PLANTING LAND	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Yes	14,746 **(50.6%)**	146,729 **(32.7%)**	84,564 **(39.0%)**	246,039 **(35.4%)**
No	14,398 **(49.4%)**	301,997 **(67.3%)**	132,332 **(61.0%)**	448,727 **(64.6%)**
Not stated	0 **(0.0%)**	9 **(0.0%)**	8 **(0.0%)**	17 **(0.0%)**
TOTAL	29,144 **(100.0%)**	448,735 **(100.0%)**	216,904 **(100.0%)**	694,783 **(100.0%)**

Table 4.17 below presents a distribution of whether a household has planted any crop in the previous year by household disability status. A total of 96,702 (13.9%) and 42,283 (6.1%) households planted some crops, and both planted and looked after crops respectively. These implies that a total of 138,985 (20.0%) households had planted some crops during the year preceding the census year. About 30.0 percent of the case households planted some crops compared to 18.0 percent and 23.0 percent of control households and households with unreported disability status.

TABLE 17 Distribution of whether any member of a household has planted some crops by household disability status; 2022 Botswana PHC

PLANTED ANY CROP	HOUSEHOLD DISABILITY STATUS			TOTAL
	CASE	CONTROL	NOT STATED	
Planted	5,086 **(17.5%)**	57,695 **(12.9%)**	33,921 **(15.6%)**	96,702 **(13.9%)**
Look After	202 **(0.7%)**	5,408 **(1.2%)**	1,540 **(0.7%)**	7,150 **(1.0%)**
Both Plant and Look After	3,051 **(10.5%)**	23,072 **(5.1%)**	16,160 **(7.5%)**	42,283 **(6.1%)**
No	20,805 **(71.4%)**	362,553 **(80.8%)**	165,280 **(76.2%)**	548,638 **(79.0%)**
Not stated	0 **(0.0%)**	7 **(0.0%)**	3 **(0.0%)**	10 **(0.0%)**
TOTAL	29,144 **(100.0%)**	448,735 **(100.0%)**	216,904 **(100.0%)**	694,783 **(100.0%)**

FIGURE 4.3. Distribution of proportion of households which have planted different crops by household disability status; 2022 Botswana PHC. The denominator is the total number of households which have either planted some crops, or both planted and looked after crops.



When comparing the proportions by disability status of a household, case households outperformed all other types of households across the different crops considered. That is, case households planted different crops at higher proportions than the other types of households including the national proportions. Over 90.0 percent of case households planted groundnuts, sunflower, millet, watermelons, melons, beans/ pulses, maize, sorghum, and sweet reed while the case households had less than 90.0 percent across all these crops.

4.5. Wealth and Disability

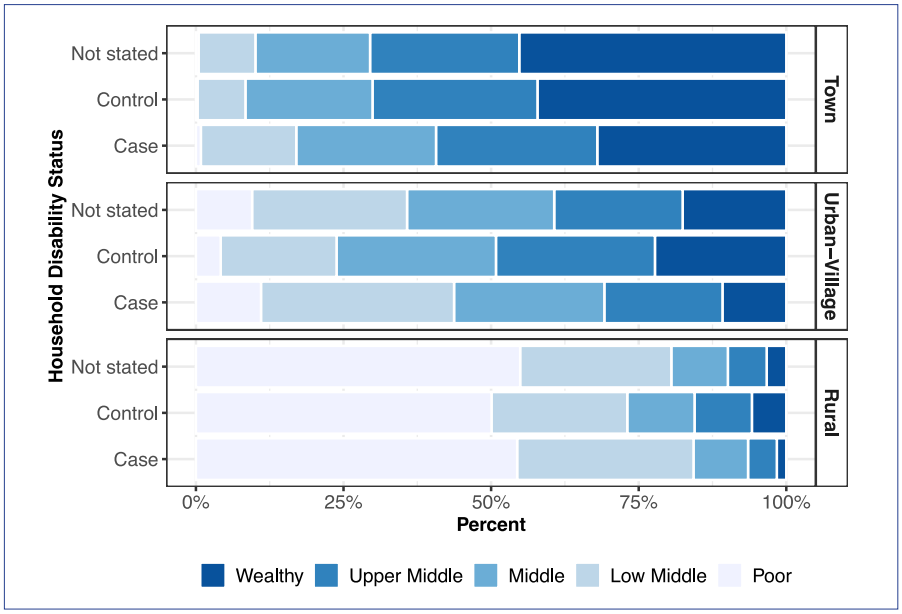
The wealth index is a comprehensive measure designed to capture a household's overall standard of living. The index is based on the following factors from the census questionnaire.

- Livestock ownership.
- Access to land used for planting.
- Type and tenure of housing unit.
- Wall, floor, and roof materials.
- Source of energy for cooking, heating, and lighting.
- Type of drinking water source.
- Toilet facilities and refuse disposal.
- Ownership of common durables like televisions and cars.
- Number of household members per sleeping room.

Figure 4.4 below present a distribution of household's wealth index by household disability status and type of locality. The figure shows that rural villages have a higher concentration of households categorized as poor compared to urban villages and town/cities. Conversely, town/cities have a larger proportion of wealthy households.

Across all localities, a greater share of control households is classified as wealthy compared to the case households. This suggests a potential link between disability status, wealth, and location. Rural areas might have fewer resources or opportunities for wealth accumulation, potentially impacting both groups (with and without disabilities) but disproportionately affecting those with disabilities.

FIGURE 4.4. Distribution of proportions of wealth index quintiles by household disability status and type of locality; 2022 Botswana PHC.



5. CONCLUSIONS

This analysis of the 2022 Botswana Population and Housing Census (PHC) data reveals significant differences in the characteristics of households with and without Individuals with Disabilities (IWDs). Below a breakdown of the key findings and their potential implications are presented.

Household Composition:

- Households with IWDs tend to be larger than those without, with an average of 3.3 members compared to 2.3.This might be due to extended family providing care for the person with a disability.
- Female-headed households are more prevalent among those with IWDs across all localities. This could be due to various reasons, needing further investigation.

Age:

- On average, households with IWDs have older members (46.9 years) compared to control households (36.1 years). This might suggest a correlation between disability and age.

Dependents:

- Households with IWDs have a higher number of dependents (aged less than 15 or 65+) compared to control households. This could be due to a need for additional care for the person with a disability.

Multidimensional Poverty:

- Households with IWDs experience higher deprivation across various indicators of multidimensional poverty, including:
    - **Education:** Higher rates of school attendance deprivation and lower school attainment.
    - **Employment:** Lower employment rates within the household.
    - **Living Standards:** More likely to lack access to electricity, improved sanitation facilities, and durable assets.

Implications:

These findings highlight the challenges faced by households with IWDs in Botswana. They are more likely to be larger, female-headed, and have older members. Additionally, they experience greater multidimensional poverty across various aspects of life

Policy Considerations:

Based on these results, policymakers should consider strategies to address the specific needs of households with IWDs. Potential areas of focus include:

- **Social support programs**: Providing financial assistance or in-home care services to alleviate the burden on families.
- **Inclusive education:** Ensuring access to quality education for children with disabilities.
- **Employment opportunities:** Programs to promote skills development and job placement for people with disabilities and caregivers.
- **Accessible infrastructure:** Improving accessibility of public spaces and transportation for people with disabilities.
- **Targeted poverty alleviation programs:** Designing interventions that address the specific challenges faced by households with IWDs, such as access to electricity and sanitation.

Further Research:

- This analysis provides valuable insights but doesn't capture the full picture. Some of the areas for further research which can be useful in policy development and successful implementation.
- Investigate the reasons behind the higher prevalence of female-headed households with IWDs.
- Explore the specific types of disabilities present in these households and their impact on the household dynamics.
- Conduct qualitative studies to understand the lived experiences of people with disabilities and their families.
-

By addressing these issues and conducting further research, Botswana can work towards creating a more inclusive society that ensures equal opportunities and a better standard of living for all citizens, including those with disabilities.

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APPENDICES

TABLE A.1. Distribution of sex of household head by household disability status and district

DISTRICT	SEX OF HEAD	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
GABORONE	Female	849 **(52.4%)**	24,551 **(39.7%)**	6,983 **(37.2%)**	32,383 **(39.4%)**
	Male	757 **(46.7%)**	36,496 **(59.0%)**	11,381 **(60.6%)**	48,634 **(59.1%)**
	No Head	15 **(0.9%)**	800 **(1.3%)**	420 **(2.2%)**	1,235 **(1.5%)**
FRANCISTOWN	Female	467 **(55.1%)**	9,544 **(41.1%)**	4,617 **(47.9%)**	14,628 **(43.4%)**
	Male	371 **(43.8%)**	13,343 **(57.5%)**	4,769 **(49.5%)**	18,483 **(54.9%)**
	No Head	10 **(1.2%)**	324 **(1.4%)**	252 **(2.6%)**	586 **(1.7%)**
LOBATSE	Female	175 **(54.0%)**	2,672 **(39.1%)**	1,297 **(49.0%)**	4,144 **(42.2%)**
	Male	149 **(46.0%)**	4,073 **(59.6%)**	1,281 **(48.4%)**	5,503 **(56.1%)**
	No Head	0 **(0.0%)**	94 **(1.4%)**	69 **(2.6%)**	163 **(1.7%)**
SELIBE PHIKWE	Female	169 **(53.5%)**	3,985 **(44.0%)**	2,054 **(52.5%)**	6,208 **(46.7%)**
	Male	144 **(45.6%)**	4,953 **(54.7%)**	1,759 **(44.9%)**	6,856 **(51.6%)**
	No Head	3 **(0.9%)**	120 **(1.3%)**	101 **(2.6%)**	224 **(1.7%)**
ORAPA	Female	7 **(35.0%)**	1,021 **(45.0%)**	193 **(25.6%)**	1,221 **(40.1%)**
	Male	13 **(65.0%)**	1,191 **(52.5%)**	528 **(70.1%)**	1,732 **(56.9%)**
	No Head	0 **(0.0%)**	57 **(2.5%)**	32 **(4.2%)**	89 **(2.9%)**
JWANENG	Female	50 **(55.6%)**	1,793 **(37.6%)**	593 **(34.5%)**	2,436 **(37.1%)**
	Male	40 **(44.4%)**	2,948 **(61.9%)**	1,106 **(64.4%)**	4,094 **(62.3%)**
	No Head	0 **(0.0%)**	22 **(0.5%)**	19 **(1.1%)**	41 **(0.6%)**
SOWA	Female	8 **(47.1%)**	278 **(34.8%)**	87 **(30.4%)**	373 **(33.9%)**
	Male	8 **(47.1%)**	510 **(63.9%)**	193 **(67.5%)**	711 **(64.6%)**
	No Head	1 **(5.9%)**	10 **(1.3%)**	6 **(2.1%)**	17 **(1.5%)**
SOUTHERN	Female	1,020 **(54.5%)**	8,919 **(38.9%)**	7,260 **(56.2%)**	17,199 **(45.6%)**
	Male	829 **(44.3%)**	13,592 **(59.3%)**	5,233 **(40.5%)**	19,654 **(52.1%)**
	No Head	23 **(1.2%)**	400 **(1.7%)**	435 **(3.4%)**	858 **(2.3%)**
BAROLONG	Female	696 **(55.3%)**	3,674 **(38.5%)**	3,273 **(58.1%)**	7,643 **(46.5%)**
	Male	556 **(44.2%)**	5,792 **(60.7%)**	2,278 **(40.5%)**	8,626 **(52.5%)**
	No Head	7 **(0.6%)**	82 **(0.9%)**	80 **(1.4%)**	169 **(1.0%)**
NGWAKETSE WEST	Female	197 **(44.1%)**	1,311 **(34.2%)**	1,184 **(51.9%)**	2,692 **(41.0%)**
	Male	244 **(54.6%)**	2,429 **(63.4%)**	1,022 **(44.8%)**	3,695 **(56.3%)**
	No Head	6 **(1.3%)**	92 **(2.4%)**	77 **(3.4%)**	175 **(2.7%)**
SOUTH EAST	Female	656 **(51.6%)**	10,865 **(42.0%)**	4,178 **(46.0%)**	15,699 **(43.4%)**
	Male	606 **(47.7%)**	14,680 **(56.8%)**	4,695 **(51.7%)**	19,981 **(55.2%)**
	No Head	9 **(0.7%)**	303 **(1.2%)**	205 **(2.3%)**	517 **(1.4%)**
KWENENG EAST	Female	2,006 **(54.1%)**	23,927 **(36.0%)**	13,739 **(45.6%)**	39,672 **(39.5%)**
	Male	1,635 **(44.1%)**	40,994 **(61.6%)**	15,191 **(50.5%)**	57,820 **(57.6%)**
	No Head	69 **(1.9%)**	1,598 **(2.4%)**	1,168 **(3.9%)**	2,835 **(2.8%)**
KWENENG WEST	Female	635 **(52.6%)**	2,726 **(30.0%)**	2,907 **(52.0%)**	6,268 **(39.5%)**
	Male	557 **(46.1%)**	6,179 **(68.1%)**	2,479 **(44.4%)**	9,215 **(58.1%)**
	No Head	15 **(1.2%)**	168 **(1.9%)**	200 **(3.6%)**	383 **(2.4%)**
KGATLENG (Wards)	Female	763 **(54.4%)**	8,571 **(35.5%)**	5,283 **(48.5%)**	14,617 **(40.1%)**
	Male	627 **(44.7%)**	15,187 **(62.9%)**	5,314 **(48.8%)**	21,128 **(58.0%)**
	No Head	13 **(0.9%)**	368 **(1.5%)**	287 **(2.6%)**	668 **(1.8%)**

TABLE A.1. CONT'D Distribution of sex of household head by household disability status and district

DISTRICT	SEX OF HEAD	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
CENTRAL SEROWE - PALAPYE	Female	1,643 (60.6%)	14,469 (40.9%)	10,983 (58.5%)	27,095 (47.7%)
	Male	1,039 (38.3%)	20,550 (58.1%)	7,363 (39.2%)	28,952 (50.9%)
	No Head	28 (1.0%)	350 (1.0%)	418 (2.2%)	796 (1.4%)
CENTRAL MAHALAPYE	Female	1,291 (55.7%)	8,453 (39.0%)	7,403 (59.0%)	17,147 (46.9%)
	Male	997 (43.0%)	12,753 (58.8%)	4,660 (37.1%)	18,410 (50.4%)
	No Head	29 (1.3%)	481 (2.2%)	487 (3.9%)	997 (2.7%)
CENTRAL BOBONONG	Female	617 (56.9%)	5,474 (41.2%)	4,628 (59.9%)	10,719 (48.5%)
	Male	451 (41.6%)	7,600 (57.1%)	2,816 (36.5%)	10,867 (49.2%)
	No Head	16 (1.5%)	228 (1.7%)	279 (3.6%)	523 (2.4%)
CENTRAL BOTETI	Female	404 (54.2%)	4,920 (36.4%)	3,687 (52.9%)	9,011 (42.5%)
	Male	330 (44.3%)	8,363 (62.0%)	3,079 (44.2%)	11,772 (55.5%)
	No Head	11 (1.5%)	215 (1.6%)	206 (3.0%)	432 (2.0%)
CENTRAL TUTUME	Female	1,516 (58.9%)	11,471 (41.5%)	9,082 (55.8%)	22,069 (47.5%)
	Male	1,027 (39.9%)	15,669 (56.7%)	6,654 (40.9%)	23,350 (50.2%)
	No Head	30 (1.2%)	517 (1.9%)	532 (3.3%)	1,079 (2.3%)
NORTH EAST	Female	588 (61.7%)	5,694 (43.7%)	3,805 (55.4%)	10,087 (48.4%)
	Male	355 (37.3%)	7,060 (54.2%)	2,847 (41.4%)	10,262 (49.2%)
	No Head	10 (1.0%)	264 (2.0%)	220 (3.2%)	494 (2.4%)
NGAMILAND EAST	Female	662 (50.2%)	6,830 (37.1%)	6,377 (54.8%)	13,869 (44.2%)
	Male	634 (48.0%)	11,035 (60.0%)	4,753 (40.8%)	16,422 (52.4%)
	No Head	24 (1.8%)	530 (2.9%)	513 (4.4%)	1,067 (3.4%)
NGAMILAND WEST	Female	548 (56.1%)	3,583 (40.8%)	4,911 (61.1%)	9,042 (50.8%)
	Male	406 (41.6%)	4,819 (54.9%)	2,605 (32.4%)	7,830 (44.0%)
	No Head	22 (2.3%)	371 (4.2%)	524 (6.5%)	917 (5.2%)
Chobe	Female	161 (56.5%)	2,656 (37.2%)	1,281 (48.6%)	4,098 (40.7%)
	Male	119 (41.8%)	4,366 (61.1%)	1,256 (47.6%)	5,741 (57.0%)
	No Head	5 (1.8%)	122 (1.7%)	100 (3.8%)	227 (2.3%)
DELTA	Female	9 (42.9%)	35 (43.2%)	50 (56.8%)	94 (49.5%)
	Male	12 (57.1%)	43 (53.1%)	34 (38.6%)	89 (46.8%)
	No Head	0 (0.0%)	3 (3.7%)	4 (4.5%)	7 (3.7%)
GHANZI	Female	370 (48.1%)	3,111 (35.2%)	2,655 (48.3%)	6,136 (40.6%)
	Male	390 (50.7%)	5,555 (62.9%)	2,684 (48.8%)	8,629 (57.1%)
	No Head	9 (1.2%)	170 (1.9%)	156 (2.8%)	335 (2.2%)
CKGR	Female	4 (66.7%)	13 (29.5%)	8 (25.0%)	25 (30.5%)
	Male	2 (33.3%)	29 (65.9%)	24 (75.0%)	55 (67.1%)
	No Head	0 (0.0%)	2 (4.5%)	0 (0.0%)	2 (2.4%)
KGALAGADI SOUTH	Female	322 (55.6%)	2,263 (38.9%)	1,867 (56.1%)	4,452 (45.8%)
	Male	250 (43.2%)	3,449 (59.3%)	1,336 (40.1%)	5,035 (51.8%)
	No Head	7 (1.2%)	101 (1.7%)	127 (3.8%)	235 (2.4%)
KGALAGADI NORTH	Female	222 (55.4%)	1,685 (37.6%)	1,121 (49.6%)	3,028 (42.4%)
	Male	174 (43.4%)	2,706 (60.5%)	1,070 (47.3%)	3,950 (55.3%)
	No Head	5 (1.2%)	85 (1.9%)	71 (3.1%)	161 (2.3%)
TOTAL	**Female**	**16,055 (55.1%)**	**174,494 (38.9%)**	**111,506 (51.4%)**	**302,055 (43.5%)**
	Male	**12,722 (43.7%)**	**266,364 (59.4%)**	**98,410 (45.4%)**	**377,496 (54.3%)**
	No Head	**367 (1.3%)**	**7,877 (1.8%)**	**6,988 (3.2%)**	**15,232 (2.2%)**

TABLE A.2. Distribution of household sizes by district and household disability status

DISTRICT	TYPE OF HOUSEHOLD	HOUSEHOLD SIZES										
		1	2	3	4	5	6	7	8	9	10	OVER 10
GABORONE	Case	331 (20.4%)	340 (21.0%)	297 (18.3%)	289 (17.8%)	163 (10.1%)	103 (6.4%)	52 (3.2%)	21 (1.3%)	15 (0.9%)	3 (0.2%)	7 (0.4%)
	Control	23,385 (37.8%)	16,256 (26.3%)	9,363 (15.1%)	7,034 (11.4%)	3,530 (5.7%)	1,430 (2.3%)	512 (0.8%)	183 (0.3%)	84 (0.1%)	42 (0.1%)	28 (0.0%)
	Not Stated	39 (0.2%)	1,926 (10.3%)	4,055 (21.6%)	4,551 (24.2%)	3,701 (19.7%)	2,192 (11.7%)	1,104 (5.9%)	505 (2.7%)	286 (1.5%)	158 (0.8%)	267 (1.4%)
	Total	23,755 (28.9%)	18,522 (22.5%)	13,715 (16.7%)	11,874 (14.4%)	7,394 (9.0%)	3,725 (4.5%)	1,668 (2.0%)	709 (0.9%)	385 (0.5%)	203 (0.2%)	302 (0.4%)
FRANCISTOWN	Case	201 (23.7%)	164 (19.3%)	150 (17.7%)	129 (15.2%)	80 (9.4%)	53 (6.2%)	29 (3.4%)	20 (2.4%)	10 (1.2%)	8 (0.9%)	4 (0.5%)
	Control	10,330 (44.5%)	5,556 (23.9%)	3,083 (13.3%)	2,155 (9.3%)	1,190 (5.1%)	525 (2.3%)	213 (0.9%)	76 (0.3%)	38 (0.2%)	21 (0.1%)	24 (0.1%)
	Not Stated	18 (0.2%)	1,052 (10.9%)	2,091 (21.7%)	2,123 (22.0%)	1,662 (17.2%)	1,073 (11.1%)	594 (6.2%)	337 (3.5%)	239 (2.5%)	139 (1.4%)	310 (3.2%)
	Total	10,549 (31.3%)	6,772 (20.1%)	5,324 (15.8%)	4,407 (13.1%)	2,932 (8.7%)	1,651 (4.9%)	836 (2.5%)	433 (1.3%)	287 (0.9%)	168 (0.5%)	338 (1.0%)
LOBATSE	Case	69 (21.3%)	70 (21.6%)	57 (17.6%)	44 (13.6%)	34 (10.5%)	27 (8.3%)	18 (5.6%)	3 -1%	2 -1%	0 (0.0%)	0 (0.0%)
	Control	3,077 (45.0%)	1,554 (22.7%)	978 (14.3%)	662 (9.7%)	334 (4.9%)	133 (1.9%)	57 (0.8%)	18 (0.3%)	12 (0.2%)	7 (0.1%)	7 -0%
	Not Stated	6 -0%	329 (12.4%)	526 (19.9%)	558 (21.1%)	454 (17.2%)	294 (11.1%)	166 (6.3%)	104 (3.9%)	62 (2.3%)	42 (1.6%)	106 (4.0%)
	Total	3,152 (32.1%)	1,953 (19.9%)	1,561 (15.9%)	1,264 (12.9%)	822 (8.4%)	454 (4.6%)	241 (2.5%)	125 (1.3%)	76 (0.8%)	49 (0.5%)	113 (1.2%)
SELIBE PHIKWE	Case	65 (20.6%)	57 (18.0%)	67 (21.2%)	47 (14.9%)	41 (13.0%)	16 (5.1%)	12 (3.8%)	6 -2%	4 -1%	0 (0.0%)	1 -0%
	Control	3,636 (40.1%)	2,026 (22.4%)	1,447 (16.0%)	1,056 (11.7%)	502 (5.5%)	249 (2.7%)	85 (0.9%)	35 (0.4%)	12 (0.1%)	5 (0.1%)	5 -0%
	Not Stated	10 -0%	384 (9.8%)	731 (18.7%)	868 (22.2%)	762 (19.5%)	515 (13.2%)	260 (6.6%)	154 (3.9%)	97 (2.5%)	46 (1.2%)	87 (2.2%)
	Total	3,711 (27.9%)	2,467 (18.6%)	2,245 (16.9%)	1,971 (14.8%)	1,305 (9.8%)	780 (5.9%)	357 (2.7%)	195 (1.5%)	113 (0.9%)	51 (0.4%)	93 (0.7%)
ORAPA	Case	1 -5%	0 0%	6 -30%	6 -30%	6 -30%	0 0%	1 -5%	0 0%	0 0%	0 (0.0%)	0 0%
	Control	1,095 (48.3%)	367 (16.2%)	293 (12.9%)	298 (13.1%)	161 (7.1%)	40 (1.8%)	11 (0.5%)	3 (0.1%)	1 (0.0%)	0 (0.0%)	0 0%
	Not Stated	1 -0%	66 (8.8%)	121 (16.1%)	187 (24.8%)	181 (24.0%)	123 (16.3%)	51 (6.8%)	12 (1.6%)	9 (1.2%)	1 (0.1%)	1 -0%
	Total	1,097 (36.1%)	433 (14.2%)	420 (13.8%)	491 (16.1%)	348 (11.4%)	163 (5.4%)	63 (2.1%)	15 (0.5%)	10 (0.3%)	1 (0.0%)	1 0%
JWANENG	Case	24 (26.7%)	17 (18.9%)	12 (13.3%)	16 (17.8%)	7 -8%	9 -10%	2 -2%	2 -2%	0 0%	0 (0.0%)	1 -1%
	Control	2,401 (50.4%)	981 (20.6%)	581 (12.2%)	421 (8.8%)	230 (4.8%)	102 (2.1%)	35 (0.7%)	7 -0%	4 -0%	1 (0.0%)	0 0%
	Not Stated	1 -0%	253 (14.7%)	347 (20.2%)	409 (23.8%)	337 (19.6%)	181 (10.5%)	101 (5.9%)	42 (2.4%)	22 (1.3%)	10 (0.6%)	15 (0.9%)
	Total	2,426 (36.9%)	1,251 (19.0%)	940 (14.3%)	846 (12.9%)	574 (8.7%)	292 (4.4%)	138 (2.1%)	51 (0.8%)	26 (0.4%)	11 (0.2%)	16 (0.2%)

TABLE A.2. CONT'D Distribution of household sizes by district and household disability status

DISTRICT	TYPE OF HOUSEHOLD	HOUSEHOLD SIZES										
		1	2	3	4	5	6	7	8	9	10	OVER 10
SOWA	Case	7 -41%	3 -18%	3 -18%	1 -6%	2 -12%	1 -6%	0 0%	0 0%	0 0%	0 (0.0%)	0 0%
	Control	442 (55.4%)	131 (16.4%)	107 (13.4%)	64 (8.0%)	37 (4.6%)	12 (1.5%)	1 (0.1%)	1 (0.1%)	2 (0.3%)	1 (0.1%)	0 (0.0%)
	Not Stated	0 0%	37 (12.9%)	50 (17.5%)	69 (24.1%)	64 (22.4%)	30 (10.5%)	20 (7.0%)	6 (2.1%)	7 (2.4%)	2 (0.7%)	1 (0.3%)
	Total	449 (40.8%)	171 (15.5%)	160 (14.5%)	134 (12.2%)	103 (9.4%)	43 (3.9%)	21 (1.9%)	7 (0.6%)	9 (0.8%)	3 (0.3%)	1 (0.1%)
SOUTHERN	Case	383 (20.5%)	409 (21.8%)	341 (18.2%)	248 (13.2%)	182 (9.7%)	136 (7.3%)	64 (3.4%)	45 (2.4%)	23 (1.2%)	23 (1.2%)	18 (1.0%)
	Control	9,784 (42.7%)	4,906 (21.4%)	3,050 (13.3%)	2,172 (9.5%)	1,409 (6.1%)	779 (3.4%)	360 (1.6%)	212 (0.9%)	105 (0.5%)	61 (0.3%)	73 (0.3%)
	Not Stated	27 -0%	930 (7.2%)	1,739 (13.5%)	2,213 (17.1%)	1,998 (15.5%)	1,705 (13.2%)	1,265 (9.8%)	920 (7.1%)	630 (4.9%)	462 (3.6%)	1,039 (8.0%)
	Total	10,194 (27.0%)	6,245 (16.6%)	5,130 (13.6%)	4,633 (12.3%)	3,589 (9.5%)	2,620 (6.9%)	1,689 (4.5%)	1,177 (3.1%)	758 (2.0%)	546 (1.4%)	1,130 (3.0%)
BAROLONG	Case	318 (25.3%)	288 (22.9%)	228 (18.1%)	159 (12.6%)	105 (8.3%)	79 (6.3%)	40 (3.2%)	21 (1.7%)	7 -1%	8 (0.6%)	6 -1%
	Control	4,519 (47.3%)	1,951 (20.4%)	1,226 (12.8%)	845 (8.9%)	474 (5.0%)	278 (2.9%)	119 (1.2%)	69 (0.7%)	33 (0.3%)	18 (0.2%)	16 (0.2%)
	Not Stated	9 -0%	430 (7.6%)	782 (13.9%)	910 (16.2%)	913 (16.2%)	750 (13.3%)	546 (9.7%)	405 (7.2%)	285 (5.1%)	188 (3.3%)	413 (7.3%)
	Total	4,846 (29.5%)	2,669 (16.2%)	2,236 (13.6%)	1,914 (11.6%)	1,492 (9.1%)	1,107 (6.7%)	705 (4.3%)	495 (3.0%)	325 (2.0%)	214 (1.3%)	435 (2.6%)
NGWAKETSE WEST	Case	126 (28.2%)	103 (23.0%)	77 (17.2%)	43 (9.6%)	33 (7.4%)	23 (5.1%)	16 (3.6%)	12 (2.7%)	4 -1%	3 (0.7%)	7 -2%
	Control	1,935 (50.5%)	792 (20.7%)	412 (10.8%)	278 (7.3%)	175 (4.6%)	110 (2.9%)	63 (1.6%)	31 (0.8%)	15 (0.4%)	9 (0.2%)	12 (0.3%)
	Not Stated	2 -0%	176 (7.7%)	308 (13.5%)	372 (16.3%)	368 (16.1%)	254 (11.1%)	209 (9.2%)	155 (6.8%)	135 (5.9%)	97 (4.2%)	207 (9.1%)
	Total	2,063 (31.4%)	1,071 (16.3%)	797 (12.1%)	693 (10.6%)	576 (8.8%)	387 (5.9%)	288 (4.4%)	198 (3.0%)	154 (2.3%)	109 (1.7%)	226 (3.4%)
SOUTH EAST	Case	264 (20.8%)	261 (20.5%)	226 (17.8%)	190 (14.9%)	120 (9.4%)	87 (6.8%)	54 (4.2%)	39 (3.1%)	12 (0.9%)	8 (0.6%)	10 (0.8%)
	Control	10,461 (40.5%)	6,758 (26.1%)	3,550 (13.7%)	2,508 (9.7%)	1,401 (5.4%)	616 (2.4%)	310 (1.2%)	107 (0.4%)	56 (0.2%)	40 (0.2%)	41 (0.2%)
	Not Stated	17 -0%	851 (9.4%)	1,847 (20.3%)	1,946 (21.4%)	1,553 (17.1%)	988 (10.9%)	571 (6.3%)	429 (4.7%)	281 (3.1%)	203 (2.2%)	392 (4.3%)
	Total	10,742 (29.7%)	7,870 (21.7%)	5,623 (15.5%)	4,644 (12.8%)	3,074 (8.5%)	1,691 (4.7%)	935 (2.6%)	575 (1.6%)	349 (1.0%)	251 (0.7%)	443 (1.2%)
KWENENG EAST	Case	685 (18.5%)	835 (22.5%)	642 (17.3%)	561 (15.1%)	358 (9.6%)	247 (6.7%)	152 (4.1%)	94 (2.5%)	54 (1.5%)	39 (1.1%)	43 (1.2%)
	Control	27,214 (40.9%)	16,691 (25.1%)	9,087 (13.7%)	6,425 (9.7%)	3,723 (5.6%)	1,707 (2.6%)	814 (1.2%)	382 (0.6%)	213 (0.3%)	134 (0.2%)	129 (0.2%)
	Not Stated	84 -0%	2,623 (8.7%)	5,704 (19.0%)	5,722 (19.0%)	5,161 (17.1%)	3,328 (11.1%)	2,308 (7.7%)	1,525 (5.1%)	1,195 (4.0%)	775 (2.6%)	1,673 (5.6%)
	Total	27,983 (27.9%)	20,149 (20.1%)	15,433 (15.4%)	12,708 (12.7%)	9,242 (9.2%)	5,282 (5.3%)	3,274 (3.3%)	2,001 (2.0%)	1,462 (1.5%)	948 (0.9%)	1,845 (1.8%)

TABLE A.2. CONT'D Distribution of household sizes by district and household disability status

DISTRICT	TYPE OF HOUSEHOLD	HOUSEHOLD SIZES										
		1	2	3	4	5	6	7	8	9	10	OVER 10
KWENENG WEST	Case	281 (23.3%)	293 (24.3%)	213 (17.6%)	160 (13.3%)	98 (8.1%)	67 (5.6%)	44 (3.6%)	24 (2.0%)	9 (0.7%)	8 (0.7%)	10 (0.8%)
	Control	4,654 (51.3%)	1,929 (21.3%)	959 (10.6%)	632 (7.0%)	425 (4.7%)	227 (2.5%)	114 (1.3%)	74 (0.8%)	29 (0.3%)	14 (0.2%)	16 (0.2%)
	Not Stated	8 -0%	429 (7.7%)	781 (14.0%)	858 (15.4%)	855 (15.3%)	725 (13.0%)	557 (10.0%)	417 (7.5%)	274 (4.9%)	218 (3.9%)	464 (8.3%)
	Total	4,943 (31.2%)	2,651 (16.7%)	1,953 (12.3%)	1,650 (10.4%)	1,378 (8.7%)	1,019 (6.4%)	715 (4.5%)	515 (3.2%)	312 (2.0%)	240 (1.5%)	490 (3.1%)
KGATLENG (Wards)	Case	310 (22.1%)	325 (23.2%)	273 (19.5%)	148 (10.5%)	137 (9.8%)	85 (6.1%)	53 (3.8%)	29 (2.1%)	24 (1.7%)	9 (0.6%)	10 (0.7%)
	Control	10,250 (42.5%)	5,399 (22.4%)	3,303 (13.7%)	2,386 (9.9%)	1,394 (5.8%)	706 (2.9%)	332 (1.4%)	171 (0.7%)	92 (0.4%)	40 (0.2%)	53 (0.2%)
	Not Stated	20 -0%	909 (8.4%)	1,910 (17.5%)	2,100 (19.3%)	1,756 (16.1%)	1,332 (12.2%)	845 (7.8%)	621 (5.7%)	412 (3.8%)	293 (2.7%)	686 (6.3%)
	Total	10,580 (29.1%)	6,633 (18.2%)	5,486 (15.1%)	4,634 (12.7%)	3,287 (9.0%)	2,123 (5.8%)	1,230 (3.4%)	821 (2.3%)	528 (1.5%)	342 (0.9%)	749 (2.1%)
CENTRAL SEROWE -PALAPYE	Case	545 (20.1%)	625 (23.1%)	485 (17.9%)	389 (14.4%)	243 (9.0%)	169 (6.2%)	106 (3.9%)	60 (2.2%)	36 (1.3%)	22 (0.8%)	30 (1.1%)
	Control	15,948 (45.1%)	7,977 (22.6%)	4,578 (12.9%)	3,109 (8.8%)	1,756 (5.0%)	979 (2.8%)	465 (1.3%)	269 (0.8%)	120 (0.3%)	79 (0.2%)	89 (0.3%)
	Not Stated	32 -0%	1,467 (7.8%)	2,880 (15.3%)	3,275 (17.5%)	2,945 (15.7%)	2,326 (12.4%)	1,662 (8.9%)	1,141 (6.1%)	871 (4.6%)	630 (3.4%)	1,535 (8.2%)
	Total	16,525 (29.1%)	10,069 (17.7%)	7,943 (14.0%)	6,773 (11.9%)	4,944 (8.7%)	3,474 (6.1%)	2,233 (3.9%)	1,470 (2.6%)	1,027 (1.8%)	731 (1.3%)	1,654 (2.9%)
CENTRAL MAHALAPYE	Case	503 (21.7%)	568 (24.5%)	442 (19.1%)	291 (12.6%)	201 (8.7%)	123 (5.3%)	78 (3.4%)	49 (2.1%)	20 (0.9%)	23 (1.0%)	19 (0.8%)
	Control	10,242 (47.2%)	4,707 (21.7%)	2,754 (12.7%)	1,757 (8.1%)	1,066 (4.9%)	548 (2.5%)	311 (1.4%)	145 (0.7%)	67 (0.3%)	41 (0.2%)	49 (0.2%)
	Not Stated	14 -0%	920 (7.3%)	1,803 (14.4%)	2,129 (17.0%)	2,023 (16.1%)	1,567 (12.5%)	1,174 (9.4%)	862 (6.9%)	584 (4.7%)	435 (3.5%)	1,039 (8.3%)
	Total	10,759 (29.4%)	6,195 (16.9%)	4,999 (13.7%)	4,177 (11.4%)	3,290 (9.0%)	2,238 (6.1%)	1,563 (4.3%)	1,056 (2.9%)	671 (1.8%)	499 (1.4%)	1,107 (3.0%)
CENTRAL BOBONONG	Case	263 (24.3%)	276 (25.5%)	188 (17.3%)	133 (12.3%)	89 (8.2%)	67 (6.2%)	31 (2.9%)	14 (1.3%)	11 (1.0%)	6 (0.6%)	6 -1%
	Control	6,567 (49.4%)	2,823 (21.2%)	1,639 (12.3%)	981 (7.4%)	620 (4.7%)	338 (2.5%)	171 (1.3%)	84 (0.6%)	37 (0.3%)	20 (0.2%)	22 (0.2%)
	Not Stated	12 -0%	738 (9.6%)	1,172 (15.2%)	1,247 (16.1%)	1,150 (14.9%)	940 (12.2%)	740 (9.6%)	528 (6.8%)	386 (5.0%)	259 (3.4%)	551 (7.1%)
	Total	6,842 (30.9%)	3,837 (17.4%)	2,999 (13.6%)	2,361 (10.7%)	1,859 (8.4%)	1,345 (6.1%)	942 (4.3%)	626 (2.8%)	434 (2.0%)	285 (1.3%)	579 (2.6%)
CENTRAL BOTETI	Case	162 (21.7%)	153 (20.5%)	128 (17.2%)	91 (12.2%)	73 (9.8%)	53 (7.1%)	28 (3.8%)	14 (1.9%)	21 (2.8%)	10 (1.3%)	12 (1.6%)
	Control	6,315 (46.8%)	3,003 (22.2%)	1,655 (12.3%)	1,139 (8.4%)	686 (5.1%)	329 (2.4%)	167 (1.2%)	96 (0.7%)	41 (0.3%)	35 (0.3%)	32 (0.2%)
	Not Stated	5 -0%	532 (7.6%)	1,104 (15.8%)	1,277 (18.3%)	1,048 (15.0%)	838 (12.0%)	605 (8.7%)	425 (6.1%)	310 (4.4%)	227 (3.3%)	601 (8.6%)
	Total	6,482 (30.6%)	3,688 (17.4%)	2,887 (13.6%)	2,507 (11.8%)	1,807 (8.5%)	1,220 (5.8%)	800 (3.8%)	535 (2.5%)	372 (1.8%)	272 (1.3%)	645 (3.0%)

TABLE A.2. CONT'D Distribution of household sizes by district and household disability status

DISTRICT	TYPE OF HOUSEHOLD	HOUSEHOLD SIZES										
		1	2	3	4	5	6	7	8	9	10	OVER 10
CENTRAL TUTUME	Case	664 (25.8%)	647 (25.1%)	424 (16.5%)	312 (12.1%)	217 (8.4%)	136 (5.3%)	83 (3.2%)	39 (1.5%)	21 (0.8%)	12 (0.5%)	18 (0.7%)
	Control	12,421 (44.9%)	6,088 (22.0%)	3,731 (13.5%)	2,450 (8.9%)	1,435 (5.2%)	744 (2.7%)	392 (1.4%)	191 (0.7%)	95 (0.3%)	55 (0.2%)	55 (0.2%)
	Not Stated	45 -0%	1,274 (7.8%)	2,462 (15.1%)	2,906 (17.9%)	2,577 (15.8%)	2,041 (12.5%)	1,536 (9.4%)	1,073 (6.6%)	752 (4.6%)	502 (3.1%)	1,100 (6.8%)
	Total	13,130 (28.2%)	8,009 (17.2%)	6,617 (14.2%)	5,668 (12.2%)	4,229 (9.1%)	2,921 (6.3%)	2,011 (4.3%)	1,303 (2.8%)	868 (1.9%)	569 (1.2%)	1,173 (2.5%)
NORTH EAST	Case	226 (23.7%)	230 (24.1%)	166 (17.4%)	123 (12.9%)	86 (9.0%)	57 (6.0%)	37 (3.9%)	19 (2.0%)	3 -0%	3 (0.3%)	3 -0%
	Control	5,953 (45.7%)	2,883 (22.1%)	1,769 (13.6%)	1,182 (9.1%)	621 (4.8%)	325 (2.5%)	146 (1.1%)	59 (0.5%)	46 (0.4%)	19 (0.1%)	15 (0.1%)
	Not Stated	13 -0%	609 (8.9%)	1,186 (17.3%)	1,322 (19.2%)	1,127 (16.4%)	852 (12.4%)	643 (9.4%)	380 (5.5%)	255 (3.7%)	163 (2.4%)	322 (4.7%)
	Total	6,192 (29.7%)	3,722 (17.9%)	3,121 (15.0%)	2,627 (12.6%)	1,834 (8.8%)	1,234 (5.9%)	826 (4.0%)	458 (2.2%)	304 (1.5%)	185 (0.9%)	340 (1.6%)
NGAMILAND EAST	Case	327 (24.8%)	286 (21.7%)	201 (15.2%)	165 (12.5%)	125 (9.5%)	74 (5.6%)	55 (4.2%)	32 (2.4%)	23 (1.7%)	11 (0.8%)	21 (1.6%)
	Control	7,821 (42.5%)	4,110 (22.3%)	2,529 (13.7%)	1,693 (9.2%)	1,053 (5.7%)	556 (3.0%)	271 (1.5%)	140 (0.8%)	82 (0.4%)	72 (0.4%)	68 (0.4%)
	Not Stated	29 -0%	973 (8.4%)	1,786 (15.3%)	1,900 (16.3%)	1,772 (15.2%)	1,389 (11.9%)	957 (8.2%)	844 (7.2%)	549 (4.7%)	380 (3.3%)	1,064 (9.1%)
	Total	8,177 (26.1%)	5,369 (17.1%)	4,516 (14.4%)	3,758 (12.0%)	2,950 (9.4%)	2,019 (6.4%)	1,283 (4.1%)	1,016 (3.2%)	654 (2.1%)	463 (1.5%)	1,153 (3.7%)
NGAMILAND WEST	Case	243 (24.9%)	209 (21.4%)	162 (16.6%)	125 (12.8%)	95 (9.7%)	46 (4.7%)	37 (3.8%)	26 (2.7%)	17 (1.7%)	7 (0.7%)	9 -1%
	Control	4,296 (49.0%)	1,746 (19.9%)	1,033 (11.8%)	690 (7.9%)	469 (5.3%)	245 (2.8%)	136 (1.6%)	81 (0.9%)	43 (0.5%)	17 (0.2%)	17 (0.2%)
	Not Stated	18 -0%	568 (7.1%)	976 (12.1%)	1,215 (15.1%)	1,234 (15.3%)	1,061 (13.2%)	831 (10.3%)	616 (7.7%)	457 (5.7%)	333 (4.1%)	731 (9.1%)
	Total	4,557 (25.6%)	2,523 (14.2%)	2,171 (12.2%)	2,030 (11.4%)	1,798 (10.1%)	1,352 (7.6%)	1,004 (5.6%)	723 (4.1%)	517 (2.9%)	357 (2.0%)	757 (4.3%)
Chobe	Case	97 (34.0%)	58 (20.4%)	53 (18.6%)	37 (13.0%)	12 (4.2%)	16 -6%	2 -1%	3 -1%	1 -0%	3 (1.1%)	3 -1%
	Control	3,770 (52.8%)	1,696 (23.7%)	816 (11.4%)	467 (6.5%)	215 (3.0%)	96 -1%	40 (0.6%)	22 (0.3%)	12 (0.2%)	3 (0.0%)	7 -0%
	Not Stated	3 -0%	332 (12.6%)	547 (20.7%)	569 (21.6%)	451 (17.1%)	258 (9.8%)	175 (6.6%)	101 (3.8%)	60 (2.3%)	46 (1.7%)	95 (3.6%)
	Total	3,870 (38.4%)	2,086 (20.7%)	1,416 (14.1%)	1,073 (10.7%)	678 (6.7%)	370 (3.7%)	217 (2.2%)	126 (1.3%)	73 (0.7%)	52 (0.5%)	105 (1.0%)
DELTA	Case	4 -19%	7 -33%	4 -19%	2 -10%	2 -10%	1 -5%	0 0%	0 0%	1 -5%	0 (0.0%)	0 0%
	Control	39 (48.1%)	18 (22.2%)	9 -11%	5 -6%	4 -5%	3 -4%	1 -1%	1 -1%	0 0%	0 (0.0%)	1 -1%
	Not Stated	0 0%	3 (3.4%)	7 -8%	14 (15.9%)	7 -8%	9 -10%	4 -5%	5 -6%	8 -9%	4 (4.5%)	27 (30.7%)
	Total	43 (22.6%)	28 (14.7%)	20 (10.5%)	21 (11.1%)	13 -7%	13 (6.8%)	5 -3%	6 -3%	9 -5%	4 (2.1%)	28 (14.7%)

TABLE A.2. CONT'D Distribution of household sizes by district and household disability status

DISTRICT	TYPE OF HOUSEHOLD	HOUSEHOLD SIZES										
		1	2	3	4	5	6	7	8	9	10	OVER 10
GHANZI	Case	198 (25.7%)	176 (22.9%)	136 (17.7%)	100 (13.0%)	61 (7.9%)	39 (5.1%)	22 (2.9%)	9 -1%	15 (2.0%)	4 (0.5%)	9 -1%
	Control	4,142 (46.9%)	2,100 (23.8%)	1,078 (12.2%)	686 (7.8%)	400 (4.5%)	178 (2.0%)	94 (1.1%)	71 (0.8%)	34 (0.4%)	29 (0.3%)	24 (0.3%)
	Not Stated	11 -0%	493 (9.0%)	887 (16.1%)	960 (17.5%)	804 (14.6%)	582 (10.6%)	481 (8.8%)	318 (5.8%)	221 (4.0%)	196 (3.6%)	542 (9.9%)
	Total	4,351 (28.8%)	2,769 (18.3%)	2,101 (13.9%)	1,746 (11.6%)	1,265 (8.4%)	799 (5.3%)	597 (4.0%)	398 (2.6%)	270 (1.8%)	229 (1.5%)	575 (3.8%)
CKGR	Case	2 -33%	2 -33%	2 -33%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 (0.0%)	0 0%
	Control	13 (29.5%)	9 -21%	3 -7%	7 -16%	3 -7%	4 -9%	4 -9%	1 -2%	0 0%	0 (0.0%)	0 0%
	Not Stated	0 0%	2 -6%	3 -9%	3 -9%	8 -25%	2 -6%	5 (15.6%)	2 -6%	3 -9%	0 (0.0%)	4 (12.5%)
	Total	15 (18.3%)	13 (15.9%)	8 -10%	10 (12.2%)	11 (13.4%)	6 -7%	9 (11.0%)	3 -4%	3 -4%	0 (0.0%)	4 -5%
KGALAGADI SOUTH	Case	152 (26.3%)	118 (20.4%)	87 (15.0%)	83 (14.3%)	45 (7.8%)	36 (6.2%)	26 (4.5%)	13 (2.2%)	3 (0.5%)	6 (1.0%)	10 (1.7%)
	Control	2,886 (49.6%)	1,160 (20.0%)	709 (12.2%)	432 (7.4%)	302 (5.2%)	157 (2.7%)	81 (1.4%)	38 (0.7%)	22 (0.4%)	6 (0.1%)	20 (0.3%)
	Not Stated	12 -0%	274 (8.2%)	490 (14.7%)	577 (17.3%)	485 (14.6%)	364 (10.9%)	306 (9.2%)	212 (6.4%)	193 (5.8%)	121 (3.6%)	296 (8.9%)
	Total	3,050 (31.4%)	1,552 (16.0%)	1,286 (13.2%)	1,092 (11.2%)	832 (8.6%)	557 (5.7%)	413 (4.2%)	263 (2.7%)	218 (2.2%)	133 (1.4%)	326 (3.4%)
KGALAGADI NORTH	Case	111 (27.7%)	94 (23.4%)	59 (14.7%)	44 (11.0%)	42 (10.5%)	17 (4.2%)	13 (3.2%)	7 -2%	8 -2%	4 (1.0%)	2 -1%
	Control	2,275 (50.8%)	967 (21.6%)	531 (11.9%)	288 (6.4%)	214 (4.8%)	102 (2.3%)	62 (1.4%)	20 (0.4%)	7 -0%	4 (0.1%)	6 -0%
	Not Stated	4 -0%	260 (11.5%)	380 (16.8%)	394 (17.4%)	338 (14.9%)	242 (10.7%)	208 (9.2%)	118 (5.2%)	111 (4.9%)	72 (3.2%)	135 (6.0%)
	Total	2,390 (33.5%)	1,321 (18.5%)	970 (13.6%)	726 (10.2%)	594 (8.3%)	361 (5.1%)	283 (4.0%)	145 (2.0%)	126 (1.8%)	80 (1.1%)	143 (2.0%)
TOTAL	Case	6,562 (22.5%)	6,614 (22.7%)	5,129 (17.6%)	3,936 (13.5%)	2,657 (9.1%)	1,767 (6.1%)	1,055 (3.6%)	601 (2.1%)	344 (1.2%)	220 (0.8%)	259 (0.9%)
	Control	195,871 (43.6%)	104,584 (23.3%)	60,273 (13.4%)	41,822 (9.3%)	23,829 (5.3%)	11,518 (2.6%)	5,367 (1.2%)	2,587 (0.6%)	1,302 (0.3%)	773 (0.2%)	809 (0.2%)
	Not Stated	440 (0.2%)	18,840 (8.7%)	36,675 (16.9%)	40,674 (18.8%)	35,734 (16.5%)	25,961 (12.0%)	17,924 (8.3%)	12,257 (5.7%)	8,694 (4.0%)	6,002 (2.8%)	13,703 (6.3%)
	Total	202,873 (29.2%)	130,038 (18.7%)	102,077 (14.7%)	86,432 (12.4%)	62,220 (9.0%)	39,246 (5.6%)	24,346 (3.5%)	15,445 (2.2%)	10,340 (1.5%)	6,995 (1.0%)	14,771 (2.1%)

Table A.3. Distribution of education multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
GABORONE	Attendance	109 (6.7%)	1,757 (2.8%)	1,122 (6.0%)	2,988 (3.6%)
	Attainment	441 (27.2%)	4,665 (7.5%)	1,865 (9.9%)	6,971 (8.5%)
	Computer use	572 (35.3%)	19,502 (31.5%)	1,321 (7.0%)	21,395 (26.0%)
FRANCISTOWN	Attendance	68 (8.0%)	758 (3.3%)	790 (8.2%)	1,616 (4.8%)
	Attainment	324 (38.2%)	2,073 (8.9%)	1,335 (13.9%)	3,732 (11.1%)
	Computer use	415 (48.9%)	9,773 (42.1%)	951 (9.9%)	11,139 (33.1%)
LOBATSE	Attendance	22 (6.8%)	208 (3.0%)	183 (6.9%)	413 (4.2%)
	Attainment	150 (46.3%)	713 (10.4%)	466 (17.6%)	1,329 (13.5%)
	Computer use	180 (55.6%)	3,063 (44.8%)	332 (12.5%)	3,575 (36.4%)
SELIBE PHIKWE	Attendance	24 (7.6%)	270 (3.0%)	255 (6.5%)	549 (4.1%)
	Attainment	141 (44.6%)	1,031 (11.4%)	604 (15.4%)	1,776 (13.4%)
	Computer use	177 (56.0%)	3,981 (44.0%)	477 (12.2%)	4,635 (34.9%)
ORAPA	Attendance	0 (0.0%)	38 (1.7%)	30 (4.0%)	68 (2.2%)
	Attainment	8 (40.0%)	104 (4.6%)	47 (6.2%)	159 (5.2%)
	Computer use	1 (5.0%)	561 (24.7%)	14 (1.9%)	576 (18.9%)
JWANENG	Attendance	5 (5.6%)	118 (2.5%)	88 (5.1%)	211 (3.2%)
	Attainment	34 (37.8%)	324 (6.8%)	134 (7.8%)	492 (7.5%)
	Computer use	43 (47.8%)	1,458 (30.6%)	146 (8.5%)	1,647 (25.1%)
SOWA	Attendance	1 (5.9%)	21 (2.6%)	10 (3.5%)	32 (2.9%)
	Attainment	1 (5.9%)	45 (5.6%)	27 (9.4%)	73 (6.6%)
	Computer use	5 (29.4%)	261 (32.7%)	33 (11.5%)	299 (27.2%)

Table A.3. CONT'D Distribution of education multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
SOUTHERN	Attendance	165 **(8.8%)**	1,096 **(4.8%)**	1,731 **(13.4%)**	2,992 **(7.9%)**
	Attainment	1,420 **(75.9%)**	7,945 **(34.7%)**	5,914 **(45.7%)**	15,279 **(40.5%)**
	Computer use	1,370 **(73.2%)**	14,358 **(62.7%)**	1,899 **(14.7%)**	17,627 **(46.7%)**
BAROLONG	Attendance	98 **(7.8%)**	436 **(4.6%)**	750 **(13.3%)**	1,284 **(7.8%)**
	Attainment	951 **(75.5%)**	3,484 **(36.5%)**	2,863 **(50.8%)**	7,298 **(44.4%)**
	Computer use	988 **(78.5%)**	6,754 **(70.7%)**	988 **(17.5%)**	8,730 **(53.1%)**
NGWAKETSE WEST	Attendance	57 **(12.8%)**	281 **(7.3%)**	436 **(19.1%)**	774 **(11.8%)**
	Attainment	364 **(81.4%)**	1,625 **(42.4%)**	1,253 **(54.9%)**	3,242 **(49.4%)**
	Computer use	379 **(84.8%)**	2,787 **(72.7%)**	431 **(18.9%)**	3,597 **(54.8%)**
SOUTH EAST	Attendance	88 **(6.9%)**	694 **(2.7%)**	580 **(6.4%)**	1,362 **(3.8%)**
	Attainment	636 **(50.0%)**	3,491 **(13.5%)**	1,945 **(21.4%)**	6,072 **(16.8%)**
	Computer use	612 **(48.2%)**	9,306 **(36.0%)**	796 **(8.8%)**	10,714 **(29.6%)**
KWENENG EAST	Attendance	315 **(8.5%)**	2,798 **(4.2%)**	3,312 **(11.0%)**	6,425 **(6.4%)**
	Attainment	2,377 **(64.1%)**	14,281 **(21.5%)**	9,449 **(31.4%)**	26,107 **(26.0%)**
	Computer use	2,296 **(61.9%)**	35,275 **(53.0%)**	3,609 **(12.0%)**	41,180 **(41.0%)**
KWENENG WEST	Attendance	125 **(10.4%)**	491 **(5.4%)**	863 **(15.4%)**	1,479 **(9.3%)**
	Attainment	985 **(81.6%)**	3,965 **(43.7%)**	3,299 **(59.1%)**	8,249 **(52.0%)**
	Computer use	1,034 **(85.7%)**	6,707 **(73.9%)**	989 **(17.7%)**	8,730 **(55.0%)**
KGATLENG (Wards)	Attendance	91 **(6.5%)**	947 **(3.9%)**	1,107 **(10.2%)**	2,145 **(5.9%)**
	Attainment	905 **(64.5%)**	5,892 **(24.4%)**	3,193 **(29.3%)**	9,990 **(27.4%)**
	Computer use	895 **(63.8%)**	13,464 **(55.8%)**	1,434 **(13.2%)**	15,793 **(43.4%)**

Table A.3. CONT'D Distribution of education multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
CENTRAL SEROWE -PALAPYE	Attendance	216 **(8.0%)**	1,580 **(4.5%)**	2,480 **(13.2%)**	4,276 **(7.5%)**
	Attainment	1,870 **(69.0%)**	9,081 **(25.7%)**	7,347 **(39.2%)**	18,298 (32.2%)
	Computer use	1,986 **(73.3%)**	21,350 **(60.4%)**	2,757 **(14.7%)**	26,093 **(45.9%)**
CENTRAL MAHALAPYE	Attendance	198 **(8.5%)**	1,020 **(4.7%)**	1,923 **(15.3%)**	3,141 **(8.6%)**
	Attainment	1,654 **(71.4%)**	6,857 **(31.6%)**	5,474 **(43.6%)**	13,985 **(38.3%)**
	Computer use	1,815 **(78.3%)**	14,791 **(68.2%)**	1,919 **(15.3%)**	18,525 **(50.7%)**
CENTRAL BOBONONG	Attendance	71 **(6.5%)**	432 **(3.2%)**	849 **(11.0%)**	1,352 **(6.1%)**
	Attainment	739 **(68.2%)**	3,834 **(28.8%)**	3,018 **(39.1%)**	7,591 **(34.3%)**
	Computer use	839 **(77.4%)**	8,971 **(67.4%)**	1,339 **(17.3%)**	11,149 **(50.4%)**
CENTRAL BOTETI	Attendance	89 **(11.9%)**	798 **(5.9%)**	1,210 **(17.4%)**	2,097 **(9.9%)**
	Attainment	548 **(73.6%)**	3,079 **(22.8%)**	2,789 **(40.0%)**	6,416 **(30.2%)**
	Computer use	542 **(72.8%)**	7,496 **(55.5%)**	860 **(12.3%)**	8,898 **(41.9%)**
CENTRAL TUTUME	Attendance	226 **(8.8%)**	1,372 **(5.0%)**	2,381 **(14.6%)**	3,979 **(8.6%)**
	Attainment	1,784 **(69.3%)**	8,099 **(29.3%)**	6,527 **(40.1%)**	16,410 **(35.3%)**
	Computer use	2,028 **(78.8%)**	18,612 **(67.3%)**	2,565 **(15.8%)**	23,205 **(49.9%)**
NORTH EAST	Attendance	82 **(8.6%)**	501 **(3.8%)**	711 **(10.3%)**	1,294 **(6.2%)**
	Attainment	604 **(63.4%)**	2,971 **(22.8%)**	2,238 **(32.6%)**	5,813 **(27.9%)**
	Computer use	701 **(73.6%)**	7,685 **(59.0%)**	1,030 **(15.0%)**	9,416 **(45.2%)**
NGAMILAND EAST	Attendance	129 **(9.8%)**	988 **(5.4%)**	1,653 **(14.2%)**	2,770 **(8.8%)**
	Attainment	789 **(59.8%)**	3,317 **(18.0%)**	3,547 **(30.5%)**	7,653 **(24.4%)**
	Computer use	882 **(66.8%)**	9,612 **(52.3%)**	1,289 **(11.1%)**	11,783 **(37.6%)**

Table A.3. CONT'D Distribution of education multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
NGAMILAND WEST	Attendance	119 (12.2%)	526 (6.0%)	1,280 (15.9%)	1,925 (10.8%)
	Attainment	780 (79.9%)	3,011 (34.3%)	4,211 (52.4%)	8,002 (45.0%)
	Computer use	811 (83.1%)	5,784 (65.9%)	1,098 (13.7%)	7,693 (43.2%)
Chobe	Attendance	20 (7.0%)	218 (3.1%)	250 (9.5%)	488 (4.8%)
	Attainment	136 (47.7%)	781 (10.9%)	558 (21.2%)	1,475 (14.7%)
	Computer use	163 (57.2%)	3,370 (47.2%)	282 (10.7%)	3,815 (37.9%)
DELTA	Attendance	3 (14.3%)	4 (4.9%)	30 (34.1%)	37 (19.5%)
	Attainment	20 (95.2%)	48 (59.3%)	72 (81.8%)	140 (73.7%)
	Computer use	19 (90.5%)	63 (77.8%)	12 (13.6%)	94 (49.5%)
GHANZI	Attendance	81 (10.5%)	537 (6.1%)	1,096 (19.9%)	1,714 (11.4%)
	Attainment	489 (63.6%)	2,457 (27.8%)	2,393 (43.5%)	5,339 (35.4%)
	Computer use	534 (69.4%)	5,036 (57.0%)	838 (15.3%)	6,408 (42.4%)
CKGR	Attendance	0 (0.0%)	12 (27.3%)	10 (31.2%)	22 (26.8%)
	Attainment	6 (100.0%)	34 (77.3%)	31 (96.9%)	71 (86.6%)
	Computer use	6 (100.0%)	34 (77.3%)	10 (31.2%)	50 (61.0%)
KGALAGADI SOUTH	Attendance	52 (9.0%)	295 (5.1%)	455 (13.7%)	802 (8.2%)
	Attainment	377 (65.1%)	1,487 (25.6%)	1,420 (42.6%)	3,284 (33.8%)
	Computer use	396 (68.4%)	3,376 (58.1%)	503 (15.1%)	4,275 (44.0%)
KGALAGADI NORTH	Attendance	35 (8.7%)	169 (3.8%)	258 (11.4%)	462 (6.5%)
	Attainment	278 (69.3%)	1,162 (26.0%)	909 (40.2%)	2,349 (32.9%)
	Computer use	294 (73.3%)	2,590 (57.9%)	354 (15.6%)	3,238 (45.4%)
TOTAL	Attendance	2,489 -9%	18,365 -4%	25,843 -12%	46,697 -7%
	Attainment	18,811 (64.5%)	95,856 -21%	72,928 -34%	187,595 (27.0%)
	Computer use	19,983 (68.6%)	236,020 (52.6%)	28,276 -13%	284,279 (40.9%)

Table A.4. Distribution of living conditions' multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
GABORONE	Electricity	186 **(11.5%)**	4,371 **(7.1%)**	1,141 **(6.1%)**	5,698 **(6.9%)**
	Clean water	4 **(0.2%)**	75 **(0.1%)**	33 **(0.2%)**	112 **(0.1%)**
	Sanitation	654 **(40.3%)**	26,294 **(42.5%)**	6,759 **(36.0%)**	33,707 **(41.0%)**
	Housing	49 **(3.0%)**	2,276 **(3.7%)**	560 **(3.0%)**	2,885 **(3.5%)**
	Assets	295 **(18.2%)**	11,404 **(18.4%)**	1,825 **(9.7%)**	13,524 **(16.4%)**
FRANCISTOWN	Electricity	112 **(13.2%)**	2,275 **(9.8%)**	996 **(10.3%)**	3,383 **(10.0%)**
	Clean water	2 **(0.2%)**	41 **(0.2%)**	14 **(0.1%)**	57 **(0.2%)**
	Sanitation	329 **(38.8%)**	11,180 **(48.2%)**	3,882 **(40.3%)**	15,391 **(45.7%)**
	Housing	54 **(6.4%)**	1,281 **(5.5%)**	499 **(5.2%)**	1,834 **(5.4%)**
	Assets	170 **(20.0%)**	4,422 **(19.1%)**	1,270 **(13.2%)**	5,862 **(17.4%)**
LOBATSE	Electricity	93 **(28.7%)**	1,267 **(18.5%)**	501 **(18.9%)**	1,861 **(19.0%)**
	Clean water	0 **(0.0%)**	6 **(0.1%)**	3 **(0.1%)**	9 **(0.1%)**
	Sanitation	138 **(42.6%)**	3,382 **(49.5%)**	1,011 **(38.2%)**	4,531 **(46.2%)**
	Housing	16 **(4.9%)**	291 **(4.3%)**	109 **(4.1%)**	416 **(4.2%)**
	Assets	112 **(34.6%)**	1,815 **(26.5%)**	597 **(22.6%)**	2,524 **(25.7%)**
SELIBE PHIKWE	Electricity	63 **(19.9%)**	967 **(10.7%)**	370 **(9.5%)**	1,400 **(10.5%)**
	Clean water	3 **(0.9%)**	20 **(0.2%)**	10 **(0.3%)**	33 **(0.2%)**
	Sanitation	96 **(30.4%)**	3,431 **(37.9%)**	1,231 **(31.5%)**	4,758 **(35.8%)**
	Housing	11 **(3.5%)**	211 **(2.3%)**	83 **(2.1%)**	305 **(2.3%)**
	Assets	65 **(20.6%)**	1,578 **(17.4%)**	532 **(13.6%)**	2,175 **(16.4%)**
ORAPA	Electricity	0 **(0.0%)**	17 **(0.7%)**	4 **(0.5%)**	21 **(0.7%)**
	Clean water	17 **(85.0%)**	1,919 **(84.6%)**	629 **(83.5%)**	2,565 **(84.3%)**
	Sanitation	1 **(5.0%)**	389 **(17.1%)**	44 **(5.8%)**	434 **(14.3%)**
	Housing	0 **(0.0%)**	92 **(4.1%)**	27 **(3.6%)**	119 **(3.9%)**
	Assets	1 **(5.0%)**	483 **(21.3%)**	24 **(3.2%)**	508 **(16.7%)**

Table A.4. CONT'D Distribution of living conditions' multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
JWANENG	Electricity	27 (30.0%)	444 (9.3%)	107 (6.2%)	578 (8.8%)
	Clean water	1 (1.1%)	14 (0.3%)	0 (0.0%)	15 (0.2%)
	Sanitation	40 (44.4%)	2,005 (42.1%)	431 (25.1%)	2,476 (37.7%)
	Housing	6 (6.7%)	149 (3.1%)	48 (2.8%)	203 (3.1%)
	Assets	27 (30.0%)	935 (19.6%)	138 (8.0%)	1,100 (16.7%)
SOWA	Electricity	0 (0.0%)	1 (0.1%)	0 (0.0%)	1 (0.1%)
	Clean water	0 (0.0%)	3 (0.4%)	0 (0.0%)	3 (0.3%)
	Sanitation	2 (11.8%)	178 (22.3%)	43 (15.0%)	223 (20.3%)
	Housing	0 (0.0%)	7 (0.9%)	0 (0.0%)	7 (0.6%)
	Assets	2 (11.8%)	76 (9.5%)	11 (3.8%)	89 (8.1%)
SOUTHERN	Electricity	684 (36.5%)	8,155 (35.6%)	3,960 (30.6%)	12,799 (33.9%)
	Clean water	88 (4.7%)	994 (4.3%)	439 (3.4%)	1,521 (4.0%)
	Sanitation	513 (27.4%)	8,613 (37.6%)	3,902 (30.2%)	13,028 (34.5%)
	Housing	224 (12.0%)	3,393 (14.8%)	1,457 (11.3%)	5,074 (13.5%)
	Assets	671 (35.8%)	7,247 (31.6%)	3,637 (28.1%)	11,555 (30.6%)
BAROLONG	Electricity	586 (46.5%)	4,126 (43.2%)	2,320 (41.2%)	7,032 (42.8%)
	Clean water	16 (1.3%)	129 (1.4%)	64 (1.1%)	209 (1.3%)
	Sanitation	254 (20.2%)	2,838 (29.7%)	1,236 (21.9%)	4,328 (26.3%)
	Housing	105 (8.3%)	1,251 (13.1%)	649 (11.5%)	2,005 (12.2%)
	Assets	530 (42.1%)	3,390 (35.5%)	1,934 (34.3%)	5,854 (35.6%)
NGWAKETSE WEST	Electricity	324 (72.5%)	2,476 (64.6%)	1,473 (64.5%)	4,273 (65.1%)
	Clean water	7 (1.6%)	63 (1.6%)	38 (1.7%)	108 (1.6%)
	Sanitation	210 (47.0%)	2,142 (55.9%)	1,166 (51.1%)	3,518 (53.6%)
	Housing	154 (34.5%)	1,442 (37.6%)	768 (33.6%)	2,364 (36.0%)
	Assets	253 (56.6%)	1,922 (50.2%)	1,159 (50.8%)	3,334 (50.8%)

Table A.4. CONT'D Distribution of living conditions' multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
SOUTH EAST	Electricity	197 (15.5%)	2,441 (9.4%)	671 (7.4%)	3,309 (9.1%)
	Clean water	13 (1.0%)	155 (0.6%)	25 (0.3%)	193 (0.5%)
	Sanitation	347 (27.3%)	10,562 (40.9%)	2,462 (27.1%)	13,371 (36.9%)
	Housing	103 (8.1%)	1,358 (5.3%)	341 (3.8%)	1,802 (5.0%)
	Assets	231 (18.2%)	5,053 (19.5%)	1,007 (11.1%)	6,291 (17.4%)
KWENENG EAST	Electricity	1,075 (29.0%)	13,315 (20.0%)	5,969 (19.8%)	20,359 (20.3%)
	Clean water	104 (2.8%)	1,185 (1.8%)	502 (1.7%)	1,791 (1.8%)
	Sanitation	1,131 (30.5%)	29,329 (44.1%)	10,309 (34.3%)	40,769 (40.6%)
	Housing	347 (9.4%)	5,048 (7.6%)	2,148 (7.1%)	7,543 (7.5%)
	Assets	1,027 (27.7%)	16,071 (24.2%)	6,075 (20.2%)	23,173 (23.1%)
KWENENG WEST	Electricity	832 (68.9%)	5,821 (64.2%)	3,727 (66.7%)	10,380 (65.4%)
	Clean water	19 (1.6%)	123 (1.4%)	153 (2.7%)	295 (1.9%)
	Sanitation	596 (49.4%)	5,352 (59.0%)	2,950 (52.8%)	8,898 (56.1%)
	Housing	437 (36.2%)	3,593 (39.6%)	1,811 (32.4%)	5,841 (36.8%)
	Assets	733 (60.7%)	4,665 (51.4%)	3,143 (56.3%)	8,541 (53.8%)
KGATLENG (Wards)	Electricity	366 (26.1%)	6,624 (27.5%)	2,026 (18.6%)	9,016 (24.8%)
	Clean water	18 (1.3%)	247 (1.0%)	97 (0.9%)	362 (1.0%)
	Sanitation	284 (20.2%)	6,899 (28.6%)	2,439 (22.4%)	9,622 (26.4%)
	Housing	123 (8.8%)	2,798 (11.6%)	717 (6.6%)	3,638 (10.0%)
	Assets	395 (28.2%)	6,495 (26.9%)	2,085 (19.2%)	8,975 (24.6%)
CENTRAL SEROWE -PALAPYE	Electricity	935 (34.5%)	10,583 (29.9%)	5,952 (31.7%)	17,470 (30.7%)
	Clean water	94 (3.5%)	901 (2.5%)	327 (1.7%)	1,322 (2.3%)
	Sanitation	725 (26.8%)	12,621 (35.7%)	5,797 (30.9%)	19,143 (33.7%)
	Housing	437 (16.1%)	5,894 (16.7%)	3,020 (16.1%)	9,351 (16.5%)
	Assets	915 (33.8%)	10,424 (29.5%)	5,623 (30.0%)	16,962 (29.8%)

Table A.4. CONT'D Distribution of living conditions' multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
CENTRAL MAHALAPYE	Electricity	933 **(40.3%)**	8,595 **(39.6%)**	4,684 **(37.3%)**	14,212 **(38.9%)**
	Clean water	41 **(1.8%)**	598 **(2.8%)**	203 **(1.6%)**	842 **(2.3%)**
	Sanitation	548 **(23.7%)**	7,156 **(33.0%)**	3,276 **(26.1%)**	10,980 **(30.0%)**
	Housing	331 **(14.3%)**	3,770 **(17.4%)**	1,754 **(14.0%)**	5,855 **(16.0%)**
	Assets	896 **(38.7%)**	7,151 **(33.0%)**	4,199 **(33.5%)**	12,246 **(33.5%)**
CENTRAL BOBONONG	Electricity	408 **(37.6%)**	4,862 **(36.6%)**	2,699 **(34.9%)**	7,969 **(36.0%)**
	Clean water	53 **(4.9%)**	826 **(6.2%)**	331 **(4.3%)**	1,210 **(5.5%)**
	Sanitation	249 **(23.0%)**	4,227 **(31.8%)**	2,005 **(26.0%)**	6,481 **(29.3%)**
	Housing	166 **(15.3%)**	2,324 **(17.5%)**	1,101 **(14.3%)**	3,591 **(16.2%)**
	Assets	352 **(32.5%)**	3,665 **(27.6%)**	2,139 **(27.7%)**	6,156 **(27.8%)**
CENTRAL BOTETI	Electricity	395 **(53.0%)**	4,510 **(33.4%)**	2,900 **(41.6%)**	7,805 **(36.8%)**
	Clean water	29 **(3.9%)**	261 **(1.9%)**	98 **(1.4%)**	388 **(1.8%)**
	Sanitation	366 **(49.1%)**	7,511 **(55.6%)**	3,552 **(50.9%)**	11,429 **(53.9%)**
	Housing	243 **(32.6%)**	3,159 **(23.4%)**	1,990 **(28.5%)**	5,392 **(25.4%)**
	Assets	365 **(49.0%)**	4,431 **(32.8%)**	2,655 **(38.1%)**	7,451 **(35.1%)**
CENTRAL TUTUME	Electricity	1,092 **(42.4%)**	9,471 **(34.2%)**	6,022 **(37.0%)**	16,585 **(35.7%)**
	Clean water	79 **(3.1%)**	931 **(3.4%)**	489 **(3.0%)**	1,499 **(3.2%)**
	Sanitation	667 **(25.9%)**	8,701 **(31.5%)**	4,954 **(30.5%)**	14,322 **(30.8%)**
	Housing	475 **(18.5%)**	4,660 **(16.8%)**	3,042 **(18.7%)**	8,177 **(17.6%)**
	Assets	1,065 **(41.4%)**	9,182 **(33.2%)**	5,609 **(34.5%)**	15,856 **(34.1%)**
NORTH EAST	Electricity	196 **(20.6%)**	2,616 **(20.1%)**	1,324 **(19.3%)**	4,136 **(19.8%)**
	Clean water	14 **(1.5%)**	434 **(3.3%)**	166 **(2.4%)**	614 **(2.9%)**
	Sanitation	140 **(14.7%)**	2,995 **(23.0%)**	1,257 **(18.3%)**	4,392 **(21.1%)**
	Housing	57 **(6.0%)**	789 **(6.1%)**	411 **(6.0%)**	1,257 **(6.0%)**
	Assets	249 **(26.1%)**	3,220 **(24.7%)**	1,427 **(20.8%)**	4,896 **(23.5%)**

Table A.4. CONT'D Distribution of living conditions' multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
NGAMILAND EAST	Electricity	641 **(48.6%)**	5,257 **(28.6%)**	3,706 **(31.8%)**	9,604 **(30.6%)**
	Clean water	116 **(8.8%)**	1,030 **(5.6%)**	584 **(5.0%)**	1,730 **(5.5%)**
	Sanitation	717 **(54.3%)**	9,176 **(49.9%)**	5,562 **(47.8%)**	15,455 **(49.3%)**
	Housing	394 **(29.8%)**	3,387 **(18.4%)**	2,368 **(20.3%)**	6,149 **(19.6%)**
	Assets	547 **(41.4%)**	5,402 **(29.4%)**	3,404 **(29.2%)**	9,353 **(29.8%)**
NGAMILAND WEST	Electricity	726 **(74.4%)**	4,592 **(52.3%)**	5,064 **(63.0%)**	10,382 **(58.4%)**
	Clean water	43 **(4.4%)**	422 **(4.8%)**	333 **(4.1%)**	798 **(4.5%)**
	Sanitation	668 **(68.4%)**	6,048 **(68.9%)**	5,859 **(72.9%)**	12,575 **(70.7%)**
	Housing	465 **(47.6%)**	3,344 **(38.1%)**	3,665 **(45.6%)**	7,474 **(42.0%)**
	Assets	695 **(71.2%)**	4,294 **(48.9%)**	4,691 **(58.3%)**	9,680 **(54.4%)**
Chobe	Electricity	93 **(32.6%)**	1,407 **(19.7%)**	480 **(18.2%)**	1,980 **(19.7%)**
	Clean water	3 **(1.1%)**	47 **(0.7%)**	19 **(0.7%)**	69 **(0.7%)**
	Sanitation	113 **(39.6%)**	3,696 **(51.7%)**	1,160 **(44.0%)**	4,969 **(49.4%)**
	Housing	46 **(16.1%)**	974 **(13.6%)**	307 **(11.6%)**	1,327 **(13.2%)**
	Assets	97 **(34.0%)**	1,657 **(23.2%)**	532 **(20.2%)**	2,286 **(22.7%)**
DELTA	Electricity	21 **(100.0%)**	80 **(98.8%)**	88 **(100.0%)**	189 **(99.5%)**
	Clean water	7 **(33.3%)**	36 **(44.4%)**	44 **(50.0%)**	87 **(45.8%)**
	Sanitation	19 **(90.5%)**	71 **(87.7%)**	76 **(86.4%)**	166 **(87.4%)**
	Housing	21 **(100.0%)**	76 **(93.8%)**	87 **(98.9%)**	184 **(96.8%)**
	Assets	14 **(66.7%)**	63 **(77.8%)**	63 **(71.6%)**	140 **(73.7%)**
GHANZI	Electricity	444 **(57.7%)**	3,903 **(44.2%)**	2,720 **(49.5%)**	7,067 **(46.8%)**
	Clean water	7 **(0.9%)**	85 **(1.0%)**	61 **(1.1%)**	153 **(1.0%)**
	Sanitation	390 **(50.7%)**	5,209 **(59.0%)**	3,025 **(55.1%)**	8,624 **(57.1%)**
	Housing	240 **(31.2%)**	2,636 **(29.8%)**	1,848 **(33.6%)**	4,724 **(31.3%)**
	Assets	377 **(49.0%)**	3,393 **(38.4%)**	2,204 **(40.1%)**	5,974 **(39.6%)**

Table A.4. CONT'D Distribution of living conditions' multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
CKGR	Electricity	6 (100.0%)	44 (100.0%)	32 (100.0%)	82 (100.0%)
	Clean water	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Sanitation	6 (100.0%)	35 (79.5%)	31 (96.9%)	72 (87.8%)
	Housing	6 (100.0%)	36 (81.8%)	31 (96.9%)	73 (89.0%)
	Assets	4 (66.7%)	29 (65.9%)	28 (87.5%)	61 (74.4%)
KGALAGADI SOUTH	Electricity	273 (47.2%)	2,369 (40.8%)	1,532 (46.0%)	4,174 (42.9%)
	Clean water	8 (1.4%)	78 (1.3%)	46 (1.4%)	132 (1.4%)
	Sanitation	164 (28.3%)	2,408 (41.4%)	1,292 (38.8%)	3,864 (39.7%)
	Housing	104 (18.0%)	1,274 (21.9%)	744 (22.3%)	2,122 (21.8%)
	Assets	262 (45.3%)	2,193 (37.7%)	1,350 (40.5%)	3,805 (39.1%)
KGALAGADI NORTH	Electricity	199 (49.6%)	1,670 (37.3%)	917 (40.5%)	2,786 (39.0%)
	Clean water	4 (1.0%)	62 (1.4%)	21 (0.9%)	87 (1.2%)
	Sanitation	122 (30.4%)	2,077 (46.4%)	932 (41.2%)	3,131 (43.9%)
	Housing	59 (14.7%)	794 (17.7%)	400 (17.7%)	1,253 (17.6%)
	Assets	199 (49.6%)	1,788 (39.9%)	913 (40.4%)	2,900 (40.6%)
TOTAL	Electricity	10,907 (37.4%)	112,259 (25.0%)	61,385 (28.3%)	184,551 (26.6%)
	Clean water	790 -3%	10,685 -2%	4,729 -2%	16,204 -2%
	Sanitation	9,489 -33%	184,525 (41.1%)	76,643 (35.3%)	270,657 (39.0%)
	Housing	4,673 -16%	56,307 -13%	29,985 -14%	90,965 -13%
	Assets	10,549 (36.2%)	122,448 (27.3%)	58,274 (26.9%)	191,271 (27.5%)

Table A.5. Distribution of social inclusion and health's multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
GABORONE	Employment	152 (9.4%)	6,187 (10.0%)	4 (0.0%)	6,343 (7.7%)
	Civil registration	2 (0.1%)	160 (0.3%)	3 (0.0%)	165 (0.2%)
	Child mortality	2 (0.1%)	30 (0.0%)	21 (0.1%)	53 (0.1%)
FRANCISTOWN	Employment	89 (10.5%)	2,839 (12.2%)	4 (0.0%)	2,932 (8.7%)
	Civil registration	0 (0.0%)	86 (0.4%)	5 (0.1%)	91 (0.3%)
	Child mortality	2 (0.2%)	16 (0.1%)	18 (0.2%)	36 (0.1%)
LOBATSE	Employment	41 (12.7%)	673 (9.8%)	0 (0.0%)	714 (7.3%)
	Civil registration	2 (0.6%)	32 (0.5%)	0 (0.0%)	34 (0.3%)
	Child mortality	1 (0.3%)	8 (0.1%)	6 (0.2%)	15 (0.2%)
SELIBE PHIKWE	Employment	27 (8.5%)	962 (10.6%)	0 (0.0%)	989 (7.4%)
	Civil registration	0 (0.0%)	29 (0.3%)	0 (0.0%)	29 (0.2%)
	Child mortality	2 (0.6%)	13 (0.1%)	5 (0.1%)	20 (0.2%)
ORAPA	Employment	0 (0.0%)	30 (1.3%)	0 (0.0%)	30 (1.0%)
	Civil registration	0 (0.0%)	6 (0.3%)	0 (0.0%)	6 (0.2%)
	Child mortality	0 (0.0%)	1 (0.0%)	0 (0.0%)	1 (0.0%)
JWANENG	Employment	9 (10.0%)	284 (6.0%)	0 (0.0%)	293 (4.5%)
	Civil registration	1 (1.1%)	17 (0.4%)	0 (0.0%)	18 (0.3%)
	Child mortality	0 (0.0%)	6 (0.1%)	1 (0.1%)	7 (0.1%)
SOWA	Employment	0 (0.0%)	9 (1.1%)	0 (0.0%)	9 (0.8%)
	Civil registration	0 (0.0%)	2 (0.3%)	0 (0.0%)	2 (0.2%)
	Child mortality	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

Table A.5. CONT'D Distribution of social inclusion and health's multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
SOUTHERN	Employment	169 (9.0%)	3,587 (15.7%)	4 (0.0%)	3,760 (10.0%)
	Civil registration	6 (0.3%)	122 (0.5%)	6 (0.0%)	134 (0.4%)
	Child mortality	4 (0.2%)	32 (0.1%)	38 (0.3%)	74 (0.2%)
BAROLONG	Employment	142 (11.3%)	1,746 (18.3%)	2 (0.0%)	1,890 (11.5%)
	Civil registration	3 (0.2%)	71 (0.7%)	4 (0.1%)	78 (0.5%)
	Child mortality	0 (0.0%)	17 (0.2%)	41 (0.7%)	58 (0.4%)
NGWAKETSE WEST	Employment	61 (13.6%)	703 (18.3%)	0 (0.0%)	764 (11.6%)
	Civil registration	1 (0.2%)	46 (1.2%)	2 (0.1%)	49 (0.7%)
	Child mortality	0 (0.0%)	10 (0.3%)	6 (0.3%)	16 (0.2%)
SOUTH EAST	Employment	99 (7.8%)	2,702 (10.5%)	1 (0.0%)	2,802 (7.7%)
	Civil registration	5 (0.4%)	62 (0.2%)	1 (0.0%)	68 (0.2%)
	Child mortality	0 (0.0%)	17 (0.1%)	12 (0.1%)	29 (0.1%)
KWENENG EAST	Employment	432 (11.6%)	12,704 (19.1%)	5 (0.0%)	13,141 (13.1%)
	Civil registration	13 (0.4%)	328 (0.5%)	9 (0.0%)	350 (0.3%)
	Child mortality	7 (0.2%)	67 (0.1%)	71 (0.2%)	145 (0.1%)
KWENENG WEST	Employment	127 (10.5%)	1,649 (18.2%)	3 (0.1%)	1,779 (11.2%)
	Civil registration	4 (0.3%)	101 (1.1%)	5 (0.1%)	110 (0.7%)
	Child mortality	2 (0.2%)	16 (0.2%)	29 (0.5%)	47 (0.3%)
KGATLENG (Wards)	Employment	124 (8.8%)	4,170 (17.3%)	4 (0.0%)	4,298 (11.8%)
	Civil registration	11 (0.8%)	127 (0.5%)	2 (0.0%)	140 (0.4%)
	Child mortality	0 (0.0%)	11 (0.0%)	10 (0.1%)	21 (0.1%)

Table A.5. CONT'D Distribution of social inclusion and health's multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
CENTRAL SEROWE -PALAPYE	Employment	234 (8.6%)	6,040 (17.1%)	6 (0.0%)	6,280 (11.0%)
	Civil registration	5 (0.2%)	249 (0.7%)	16 (0.1%)	270 (0.5%)
	Child mortality	5 (0.2%)	30 (0.1%)	72 (0.4%)	107 (0.2%)
CENTRAL MAHALAPYE	Employment	243 (10.5%)	3,913 (18.0%)	1 (0.0%)	4,157 (11.4%)
	Civil registration	11 (0.5%)	153 (0.7%)	9 (0.1%)	173 (0.5%)
	Child mortality	5 (0.2%)	20 (0.1%)	39 (0.3%)	64 (0.2%)
CENTRAL BOBONONG	Employment	77 (7.1%)	1,890 (14.2%)	1 (0.0%)	1,968 (8.9%)
	Civil registration	2 (0.2%)	64 (0.5%)	2 (0.0%)	68 (0.3%)
	Child mortality	4 (0.4%)	18 (0.1%)	40 (0.5%)	62 (0.3%)
CENTRAL BOTETI	Employment	96 (12.9%)	2,540 (18.8%)	4 (0.1%)	2,640 (12.4%)
	Civil registration	1 (0.1%)	120 (0.9%)	6 (0.1%)	127 (0.6%)
	Child mortality	1 (0.1%)	19 (0.1%)	31 (0.4%)	51 (0.2%)
CENTRAL TUTUME	Employment	285 (11.1%)	4,817 (17.4%)	4 (0.0%)	5,106 (11.0%)
	Civil registration	16 (0.6%)	206 (0.7%)	9 (0.1%)	231 (0.5%)
	Child mortality	6 (0.2%)	42 (0.2%)	63 (0.4%)	111 (0.2%)
NORTH EAST	Employment	77 (8.1%)	1,668 (12.8%)	1 (0.0%)	1,746 (8.4%)
	Civil registration	5 (0.5%)	64 (0.5%)	3 (0.0%)	72 (0.3%)
	Child mortality	3 (0.3%)	14 (0.1%)	17 (0.2%)	34 (0.2%)
NGAMILAND EAST	Employment	173 (13.1%)	3,645 (19.8%)	2 (0.0%)	3,820 (12.2%)
	Civil registration	6 (0.5%)	117 (0.6%)	3 (0.0%)	126 (0.4%)
	Child mortality	5 (0.4%)	35 (0.2%)	39 (0.3%)	79 (0.3%)

Table A.5. CONT'D Distribution of social inclusion and health's multidimensional poverty indicators by district and household disability status

DISTRICT	INDICATOR	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
Chobe	Employment	35 (12.3%)	833 (11.7%)	1 (0.0%)	869 (8.6%)
	Civil registration	0 (0.0%)	29 (0.4%)	0 (0.0%)	29 (0.3%)
	Child mortality	0 (0.0%)	10 (0.1%)	16 (0.6%)	26 (0.3%)
DELTA	Employment	4 (19.0%)	21 (25.9%)	0 (0.0%)	25 (13.2%)
	Civil registration	0 (0.0%)	1 (1.2%)	0 (0.0%)	1 (0.5%)
	Child mortality	0 (0.0%)	0 (0.0%)	1 (1.1%)	1 (0.5%)
GHANZI	Employment	91 (11.8%)	1,463 (16.6%)	0 (0.0%)	1,554 (10.3%)
	Civil registration	3 (0.4%)	45 (0.5%)	1 (0.0%)	49 (0.3%)
	Child mortality	4 (0.5%)	17 (0.2%)	25 (0.5%)	46 (0.3%)
CKGR	Employment	0 (0.0%)	10 (22.7%)	0 (0.0%)	10 (12.2%)
	Civil registration	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Child mortality	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
KGALAGADI SOUTH	Employment	63 (10.9%)	917 (15.8%)	1 (0.0%)	981 (10.1%)
	Civil registration	0 (0.0%)	27 (0.5%)	0 (0.0%)	27 (0.3%)
	Child mortality	1 (0.2%)	12 (0.2%)	11 (0.3%)	24 (0.2%)
KGALAGADI NORTH	Employment	51 (12.7%)	619 (13.8%)	0 (0.0%)	670 (9.4%)
	Civil registration	0 (0.0%)	26 (0.6%)	2 (0.1%)	28 (0.4%)
	Child mortality	1 (0.2%)	10 (0.2%)	7 (0.3%)	18 (0.3%)
TOTAL	Employment	3,017 (10.4%)	68,383 (15.2%)	50 (0.0%)	71,450 (10.3%)
	Civil registration	104 (0.4%)	2,339 (0.5%)	91 (0.0%)	2,534 (0.4%)
	Child mortality	58 (0.2%)	495 (0.1%)	674 (0.3%)	1,227 (0.2%)

Table A.6. Distribution of livestock ownership by district and household disability status

DISTRICT	LIVESTOCK OWNERSHIP	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
GABORONE	Own	379 (23.4%)	13,960 (22.6%)	4,793 (25.5%)	19,132 (23.3%)
	Look After	5 (0.3%)	183 (0.3%)	46 (0.2%)	234 (0.3%)
	Both own and Look after	20 (1.2%)	658 (1.1%)	236 (1.3%)	914 (1.1%)
	No	1,217 (75.1%)	47,046 (76.1%)	13,709 (73.0%)	61,972 (75.3%)
	TOTAL	1,621 (100.0%)	61,847 (100.0%)	18,784 (100.0%)	82,252 (100.0%)
FRANCISTOWN	Own	190 (22.4%)	5,432 (23.4%)	2,294 (23.8%)	7,916 (23.5%)
	Look After	1 (0.1%)	92 (0.4%)	34 (0.4%)	127 (0.4%)
	Both own and Look after	17 (2.0%)	373 (1.6%)	243 (2.5%)	633 (1.9%)
	No	640 (75.5%)	17,314 (74.6%)	7,067 (73.3%)	25,021 (74.3%)
	TOTAL	848 (100.0%)	23,211 (100.0%)	9,638 (100.0%)	33,697 (100.0%)
LOBATSE	Own	62 (19.1%)	1,665 (24.3%)	639 (24.1%)	2,366 (24.1%)
	Look After	0 (0.0%)	29 (0.4%)	8 (0.3%)	37 (0.4%)
	Both own and Look after	3 (0.9%)	83 (1.2%)	57 (2.2%)	143 (1.5%)
	No	259 (79.9%)	5,062 (74.0%)	1,943 (73.4%)	7,264 (74.0%)
	TOTAL	324 (100.0%)	6,839 (100.0%)	2,647 (100.0%)	9,810 (100.0%)
SELIBE PHIKWE	Own	99 (31.3%)	2,819 (31.1%)	1,229 (31.4%)	4,147 (31.2%)
	Look After	1 (0.3%)	30 (0.3%)	13 (0.3%)	44 (0.3%)
	Both own and Look after	17 (5.4%)	282 (3.1%)	151 (3.9%)	450 (3.4%)
	No	199 (63.0%)	5,927 (65.4%)	2,521 (64.4%)	8,647 (65.1%)
	TOTAL	316 (100.0%)	9,058 (100.0%)	3,914 (100.0%)	13,288 (100.0%)

Table A.6. CONT'D Distribution of livestock ownership by district and household disability status

DISTRICT	LIVESTOCK OWNERSHIP	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
ORAPA	Own	11 (55.0%)	981 (43.2%)	426 (56.6%)	1,418 (46.6%)
	Look After	0 (0.0%)	3 (0.1%)	1 (0.1%)	4 (0.1%)
	Both own and Look after	0 (0.0%)	30 (1.3%)	9 (1.2%)	39 (1.3%)
	No	9 (45.0%)	1,255 (55.3%)	317 (42.1%)	1,581 (52.0%)
	TOTAL	20 (100.0%)	2,269 (100.0%)	753 (100.0%)	3,042 (100.0%)
JWANENG	Own	33 (36.7%)	1,845 (38.7%)	744 (43.3%)	2,622 (39.9%)
	Look After	0 (0.0%)	17 (0.4%)	9 (0.5%)	26 (0.4%)
	Both own and Look after	1 (1.1%)	138 (2.9%)	55 (3.2%)	194 (3.0%)
	No	56 (62.2%)	2,763 (58.0%)	910 (53.0%)	3,729 (56.7%)
	TOTAL	90 (100.0%)	4,763 (100.0%)	1,718 (100.0%)	6,571 (100.0%)
SOWA	Own	6 (35.3%)	327 (41.0%)	134 (46.9%)	467 (42.4%)
	Look After	0 (0.0%)	3 (0.4%)	1 (0.3%)	4 (0.4%)
	Both own and Look after	1 (5.9%)	3 (0.4%)	2 (0.7%)	6 (0.5%)
	No	10 (58.8%)	465 (58.3%)	149 (52.1%)	624 (56.7%)
	TOTAL	17 (100.0%)	798 (100.0%)	286 (100.0%)	1,101 (100.0%)
SOUTHERN	Own	616 (32.9%)	7,504 (32.8%)	4,518 (34.9%)	12,638 (33.5%)
	Look After	52 (2.8%)	1,445 (6.3%)	387 (3.0%)	1,884 (5.0%)
	Both own and Look after	316 (16.9%)	3,143 (13.7%)	1,924 (14.9%)	5,383 (14.3%)
	No	888 (47.4%)	10,819 (47.2%)	6,099 (47.2%)	17,806 (47.2%)
	TOTAL	1,872 (100.0%)	22,911 (100.0%)	12,928 (100.0%)	37,711 (100.0%)

Table A.6. CONT'D Distribution of livestock ownership by district and household disability status

DISTRICT	LIVESTOCK OWNERSHIP	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
BAROLONG	Own	529 (42.0%)	3,573 (37.4%)	2,392 (42.5%)	6,494 (39.5%)
	Look After	45 (3.6%)	751 (7.9%)	196 (3.5%)	992 (6.0%)
	Both own and Look after	249 (19.8%)	1,607 (16.8%)	1,103 (19.6%)	2,959 (18.0%)
	No	436 (34.6%)	3,617 (37.9%)	1,940 (34.5%)	5,993 (36.5%)
	TOTAL	1,259 (100.0%)	9,548 (100.0%)	5,631 (100.0%)	16,438 (100.0%)
NGWAKETSE WEST	Own	142 (31.8%)	1,026 (26.8%)	647 (28.3%)	1,815 (27.7%)
	Look After	32 (7.2%)	535 (14.0%)	163 (7.1%)	730 (11.1%)
	Both own and Look after	118 (26.4%)	918 (24.0%)	666 (29.2%)	1,702 (25.9%)
	No	155 (34.7%)	1,353 (35.3%)	807 (35.3%)	2,315 (35.3%)
	TOTAL	447 (100.0%)	3,832 (100.0%)	2,283 (100.0%)	6,562 (100.0%)
SOUTH EAST	Own	303 (23.8%)	5,809 (22.5%)	2,225 (24.5%)	8,337 (23.0%)
	Look After	15 (1.2%)	594 (2.3%)	138 (1.5%)	747 (2.1%)
	Both own and Look after	178 (14.0%)	1,328 (5.1%)	613 (6.8%)	2,119 (5.9%)
	No	775 (61.0%)	18,117 (70.1%)	6,102 (67.2%)	24,994 (69.0%)
	TOTAL	1,271 (100.0%)	25,848 (100.0%)	9,078 (100.0%)	36,197 (100.0%)
KWENENG EAST	Own	1,171 (31.6%)	16,334 (24.6%)	8,465 (28.1%)	25,970 (25.9%)
	Look After	83 (2.2%)	2,162 (3.3%)	551 (1.8%)	2,796 (2.8%)
	Both own and Look after	512 (13.8%)	4,408 (6.6%)	2,519 (8.4%)	7,439 (7.4%)
	No	1,944 (52.4%)	43,615 (65.6%)	18,563 (61.7%)	64,122 (63.9%)
	TOTAL	3,710 (100.0%)	66,519 (100.0%)	30,098 (100.0%)	100,327 (100.0%)

Table A.6. CONT'D Distribution of livestock ownership by district and household disability status

DISTRICT	LIVESTOCK OWNERSHIP	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
KWENENG WEST	Own	342 **(28.3%)**	2,343 **(25.8%)**	1,564 **(28.0%)**	4,249 **(26.8%)**
	Look After	91 **(7.5%)**	1,572 **(17.3%)**	468 **(8.4%)**	2,131 **(13.4%)**
	Both own and Look after	296 **(24.5%)**	2,138 **(23.6%)**	1,564 (28.0%)	3,998 (25.2%)
	No	478 **(39.6%)**	3,020 **(33.3%)**	1,990 **(35.6%)**	5,488 **(34.6%)**
	TOTAL	1,207 **(100.0%)**	9,073 **(100.0%)**	5,586 **(100.0%)**	15,866 **(100.0%)**
KGATLENG (Wards)	Own	455 **(32.4%)**	6,530 **(27.1%)**	3,407 **(31.3%)**	10,392 **(28.5%)**
	Look After	40 **(2.9%)**	2,156 **(8.9%)**	380 **(3.5%)**	2,576 **(7.1%)**
	Both own and Look after	188 **(13.4%)**	2,435 **(10.1%)**	1,087 **(10.0%)**	3,710 **(10.2%)**
	No	720 **(51.3%)**	13,005 **(53.9%)**	6,010 **(55.2%)**	19,735 **(54.2%)**
	TOTAL	1,403 **(100.0%)**	24,126 **(100.0%)**	10,884 **(100.0%)**	36,413 **(100.0%)**
CENTRAL SEROWE -PALAPYE	Own	886 **(32.7%)**	9,903 **(28.0%)**	5,566 **(29.7%)**	16,355 **(28.8%)**
	Look After	75 **(2.8%)**	2,569 **(7.3%)**	938 **(5.0%)**	3,582 **(6.3%)**
	Both own and Look after	471 **(17.4%)**	4,451 **(12.6%)**	2,923 **(15.6%)**	7,845 **(13.8%)**
	No	1,278 **(47.2%)**	18,446 **(52.2%)**	9,337 **(49.8%)**	29,061 **(51.1%)**
	TOTAL	2,710 **(100.0%)**	35,369 **(100.0%)**	18,764 **(100.0%)**	56,843 **(100.0%)**
CENTRAL MAHALAPYE	Own	664 **(28.7%)**	6,381 **(29.4%)**	3,861 **(30.8%)**	10,906 **(29.8%)**
	Look After	67 **(2.9%)**	1,855 **(8.6%)**	550 **(4.4%)**	2,472 **(6.8%)**
	Both own and Look after	514 **(22.2%)**	4,422 **(20.4%)**	2,837 **(22.6%)**	7,773 **(21.3%)**
	No	1,072 **(46.3%)**	9,029 **(41.6%)**	5,302 **(42.2%)**	15,403 **(42.1%)**
	TOTAL	2,317 **(100.0%)**	21,687 **(100.0%)**	12,550 **(100.0%)**	36,554 **(100.0%)**

Table A.6. CONT'D Distribution of livestock ownership by district and household disability status

DISTRICT	LIVESTOCK OWNERSHIP	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
CENTRAL BOBONONG	Own	477 (44.0%)	5,364 (40.3%)	3,256 (42.2%)	9,097 (41.1%)
	Look After	29 (2.7%)	887 (6.7%)	289 (3.7%)	1,205 (5.5%)
	Both own and Look after	220 (20.3%)	2,400 (18.0%)	1,544 (20.0%)	4,164 (18.8%)
	No	358 (33.0%)	4,651 (35.0%)	2,634 (34.1%)	7,643 (34.6%)
	TOTAL	1,084 (100.0%)	13,302 (100.0%)	7,723 (100.0%)	22,109 (100.0%)
CENTRAL BOTETI	Own	264 (35.4%)	4,571 (33.9%)	2,615 (37.5%)	7,450 (35.1%)
	Look After	35 (4.7%)	893 (6.6%)	347 (5.0%)	1,275 (6.0%)
	Both own and Look after	121 (16.2%)	1,494 (11.1%)	1,026 (14.7%)	2,641 (12.4%)
	No	325 (43.6%)	6,540 (48.5%)	2,984 (42.8%)	9,849 (46.4%)
	TOTAL	745 (100.0%)	13,498 (100.0%)	6,972 (100.0%)	21,215 (100.0%)
CENTRAL TUTUME	Own	896 (34.8%)	9,341 (33.8%)	5,735 (35.3%)	15,972 (34.3%)
	Look After	65 (2.5%)	2,033 (7.4%)	650 (4.0%)	2,748 (5.9%)
	Both own and Look after	465 (18.1%)	3,816 (13.8%)	2,708 (16.6%)	6,989 (15.0%)
	No	1,147 (44.6%)	12,467 (45.1%)	7,175 (44.1%)	20,789 (44.7%)
	TOTAL	2,573 (100.0%)	27,657 (100.0%)	16,268 (100.0%)	46,498 (100.0%)
NORTH EAST	Own	317 (33.3%)	3,985 (30.6%)	2,225 (32.4%)	6,527 (31.3%)
	Look After	11 (1.2%)	603 (4.6%)	186 (2.7%)	800 (3.8%)
	Both own and Look after	296 (31.1%)	2,281 (17.5%)	1,666 (24.2%)	4,243 (20.4%)
	No	329 (34.5%)	6,149 (47.2%)	2,795 (40.7%)	9,273 (44.5%)
	TOTAL	953 (100.0%)	13,018 (100.0%)	6,872 (100.0%)	20,843 (100.0%)

Table A.6. CONT'D Distribution of livestock ownership by district and household disability status

DISTRICT	LIVESTOCK OWNERSHIP	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
NGAMILAND EAST	Own	458 **(34.7%)**	6,198 **(33.7%)**	4,201 **(36.1%)**	10,857 **(34.6%)**
	Look After	25 **(1.9%)**	447 **(2.4%)**	141 **(1.2%)**	613 **(2.0%)**
	Both own and Look after	248 **(18.8%)**	1,768 **(9.6%)**	1,336 **(11.5%)**	3,352 **(10.7%)**
	No	589 **(44.6%)**	9,982 **(54.3%)**	5,965 **(51.2%)**	16,536 **(52.7%)**
	TOTAL	1,320 **(100.0%)**	18,395 **(100.0%)**	11,643 **(100.0%)**	31,358 **(100.0%)**
NGAMILAND WEST	Own	241 **(24.7%)**	2,500 **(28.5%)**	2,247 **(27.9%)**	4,988 **(28.0%)**
	Look After	12 **(1.2%)**	256 **(2.9%)**	150 **(1.9%)**	418 **(2.3%)**
	Both own and Look after	160 **(16.4%)**	1,253 **(14.3%)**	1,323 **(16.5%)**	2,736 **(15.4%)**
	No	563 **(57.7%)**	4,764 **(54.3%)**	4,320 **(53.7%)**	9,647 **(54.2%)**
	TOTAL	976 **(100.0%)**	8,773 **(100.0%)**	8,040 **(100.0%)**	17,789 **(100.0%)**
Chobe	Own	104 **(36.5%)**	2,132 **(29.8%)**	809 **(30.7%)**	3,045 **(30.3%)**
	Look After	4 **(1.4%)**	158 **(2.2%)**	23 **(0.9%)**	185 **(1.8%)**
	Both own and Look after	30 **(10.5%)**	303 **(4.2%)**	214 **(8.1%)**	547 **(5.4%)**
	No	147 **(51.6%)**	4,551 (63.7%)	1,591 (60.3%)	6,289 (62.5%)
	TOTAL	285 **(100.0%)**	7,144 **(100.0%)**	2,637 **(100.0%)**	10,066 **(100.0%)**
DELTA	Own	9 **(42.9%)**	26 **(32.1%)**	27 **(30.7%)**	62 **(32.6%)**
	Look After	0 **(0.0%)**	0 **(0.0%)**	1 **(1.1%)**	1 **(0.5%)**
	Both own and Look after	2 **(9.5%)**	6 **(7.4%)**	5 **(5.7%)**	13 **(6.8%)**
	No	10 **(47.6%)**	49 **(60.5%)**	55 **(62.5%)**	114 **(60.0%)**
	TOTAL	21 **(100.0%)**	81 **(100.0%)**	88 **(100.0%)**	190 **(100.0%)**

Table A.6. CONT'D Distribution of livestock ownership by district and household disability status

DISTRICT	LIVESTOCK OWNERSHIP	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
GHANZI	Own	245 (31.9%)	3,034 (34.3%)	1,951 (35.5%)	5,230 (34.6%)
	Look After	36 (4.7%)	631 (7.1%)	313 (5.7%)	980 (6.5%)
	Both own and Look after	143 (18.6%)	1,188 (13.4%)	862 (15.7%)	2,193 (14.5%)
	No	345 (44.9%)	3,983 (45.1%)	2,369 (43.1%)	6,697 (44.4%)
	TOTAL	769 (100.0%)	8,836 (100.0%)	5,495 (100.0%)	15,100 (100.0%)
CKGR	Own	4 (66.7%)	26 (59.1%)	18 (56.2%)	48 (58.5%)
	Look After	0 (0.0%)	1 (2.3%)	1 (3.1%)	2 (2.4%)
	Both own and Look after	2 (33.3%)	9 (20.5%)	7 (21.9%)	18 (22.0%)
	No	0 (0.0%)	8 (18.2%)	6 (18.8%)	14 (17.1%)
	TOTAL	6 (100.0%)	44 (100.0%)	32 (100.0%)	82 (100.0%)
KGALAGADI SOUTH	Own	139 (24.0%)	1,585 (27.3%)	838 (25.2%)	2,562 (26.4%)
	Look After	19 (3.3%)	378 (6.5%)	156 (4.7%)	553 (5.7%)
	Both own and Look after	160 (27.6%)	1,269 (21.8%)	957 (28.7%)	2,386 (24.5%)
	No	261 (45.1%)	2,581 (44.4%)	1,379 (41.4%)	4,221 (43.4%)
	TOTAL	579 (100.0%)	5,813 (100.0%)	3,330 (100.0%)	9,722 (100.0%)
KGALAGADI NORTH	Own	141 (35.2%)	1,440 (32.2%)	739 (32.7%)	2,320 (32.5%)
	Look After	10 (2.5%)	280 (6.3%)	95 (4.2%)	385 (5.4%)
	Both own and Look after	85 (21.2%)	986 (22.0%)	589 (26.0%)	1,660 (23.3%)
	No	165 (41.1%)	1,770 (39.5%)	839 (37.1%)	2,774 (38.9%)
	TOTAL	401 (100.0%)	4,476 (100.0%)	2,262 (100.0%)	7,139 (100.0%)
TOTAL	Own	9,183 (31.5%)	126,634 (28.2%)	67,565 (31.1%)	203,382 (29.3%)
	Look After	753 (2.6%)	20,563 (4.6%)	6,235 (2.9%)	27,551 (4.0%)
	Both own and Look after	4,833 (16.6%)	43,190 (9.6%)	28,226 (13.0%)	76,249 (11.0%)
	No	14,375 (49.3%)	258,348 (57.6%)	114,878 (53.0%)	387,601 (55.8%)
	TOTAL	29,144 (100.0%)	448,735 (100.0%)	216,904 (100.0%)	694,783 (100.0%)

Table A.7. Distribution of planted agricultural land by district and household disability status.

DISTRICT	ANY MEMBER PLANTED	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
GABORONE	Planted	147 (34.8%)	4,590 (38.1%)	1,591 (37.1%)	6,328 (37.8%)
	Look After	2 (0.5%)	55 (0.5%)	14 (0.3%)	71 (0.4%)
	Both Plant and Look After	18 (4.3%)	379 (3.1%)	117 (2.7%)	514 (3.1%)
	No	255 (60.4%)	7,030 (58.3%)	2,563 (59.8%)	9,848 (58.8%)
	TOTAL	422 (100.0%)	12,054 (100.0%)	4,285 (100.0%)	16,761 (100.0%)
FRANCISTOWN	Planted	68 (35.6%)	1,977 (40.9%)	841 (39.5%)	2,886 (40.3%)
	Look After	0 (0.0%)	21 (0.4%)	13 (0.6%)	34 (0.5%)
	Both Plant and Look After	13 (6.8%)	234 (4.8%)	132 (6.2%)	379 (5.3%)
	No	110 (57.6%)	2,605 (53.9%)	1,145 (53.7%)	3,860 (53.9%)
	TOTAL	191 (100.0%)	4,837 (100.0%)	2,131 (100.0%)	7,159 (100.0%)
LOBATSE	Planted	18 (38.3%)	477 (43.9%)	152 (38.9%)	647 (42.5%)
	Look After	0 (0.0%)	14 (1.3%)	3 (0.8%)	17 (1.1%)
	Both Plant and Look After	1 (2.1%)	24 (2.2%)	14 (3.6%)	39 (2.6%)
	No	28 (59.6%)	571 (52.6%)	222 (56.8%)	821 (53.9%)
	TOTAL	47 (100.0%)	1,086 (100.0%)	391 (100.0%)	1,524 (100.0%)
SELIBE PHIKWE	Planted	33 (34.0%)	1,044 (42.8%)	467 (41.9%)	1,544 (42.3%)
	Look After	0 (0.0%)	8 (0.3%)	2 (0.2%)	10 (0.3%)
	Both Plant and Look After	11 (11.3%)	118 (4.8%)	73 (6.6%)	202 (5.5%)
	No	53 (54.6%)	1,271 (52.1%)	572 (51.3%)	1,896 (51.9%)
	TOTAL	97 (100.0%)	2,441 (100.0%)	1,114 (100.0%)	3,652 (100.0%)
ORAPA	Planted	5 (45.5%)	370 (38.3%)	147 (40.7%)	522 (39.0%)
	Look After	0 (0.0%)	1 (0.1%)	0 (0.0%)	1 (0.1%)
	Both Plant and Look After	0 (0.0%)	12 (1.2%)	8 (2.2%)	20 (1.5%)
	No	6 (54.5%)	582 (60.3%)	206 (57.1%)	794 (59.4%)
	TOTAL	11 (100.0%)	965 (100.0%)	361 (100.0%)	1,337 (100.0%)

Table A.7. CONT'D Distribution of planted agricultural land by district and household disability status.

DISTRICT	ANY MEMBER PLANTED	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
JWANENG	Planted	17 (44.7%)	619 (46.3%)	277 (49.6%)	913 (47.2%)
	Look After	0 (0.0%)	14 (1.0%)	2 (0.4%)	16 (0.8%)
	Both Plant and Look After	1 (2.6%)	53 (4.0%)	19 (3.4%)	73 (3.8%)
	No	20 (52.6%)	651 (48.7%)	261 (46.7%)	932 (48.2%)
	TOTAL	38 (100.0%)	1,337 (100.0%)	559 (100.0%)	1,934 (100.0%)
SOWA	Planted	3 (60.0%)	126 (47.0%)	58 (50.4%)	187 (48.2%)
	Look After	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Both Plant and Look After	0 (0.0%)	2 (0.7%)	1 (0.9%)	3 (0.8%)
	No	2 (40.0%)	140 (52.2%)	56 (48.7%)	198 (51.0%)
	TOTAL	5 (100.0%)	268 (100.0%)	115 (100.0%)	388 (100.0%)
SOUTHERN	Planted	306 (31.0%)	3,601 (40.1%)	2,195 (40.9%)	6,102 (39.8%)
	Look After	16 (1.6%)	253 (2.8%)	55 (1.0%)	324 (2.1%)
	Both Plant and Look After	186 (18.8%)	1,609 (17.9%)	987 (18.4%)	2,782 (18.1%)
	No	480 (48.6%)	3,514 (39.1%)	2,134 (39.7%)	6,128 (40.0%)
	TOTAL	988 (100.0%)	8,977 (100.0%)	5,371 (100.0%)	15,336 (100.0%)
BAROLONG	Planted	253 (38.8%)	1,751 (43.6%)	1,171 (47.1%)	3,175 (44.4%)
	Look After	3 (0.5%)	94 (2.3%)	10 (0.4%)	107 (1.5%)
	Both Plant and Look After	104 (16.0%)	588 (14.6%)	391 (15.7%)	1,083 (15.1%)
	No	292 (44.8%)	1,585 (39.4%)	916 (36.8%)	2,793 (39.0%)
	TOTAL	652 (100.0%)	4,018 (100.0%)	2,488 (100.0%)	7,158 (100.0%)
NGWAKETSE WEST	Planted	88 (32.7%)	587 (35.1%)	418 (35.2%)	1,093 (34.9%)
	Look After	2 (0.7%)	36 (2.2%)	21 (1.8%)	59 (1.9%)
	Both Plant and Look After	71 (26.4%)	413 (24.7%)	390 (32.8%)	874 (27.9%)
	No	108 (40.1%)	635 (38.0%)	359 (30.2%)	1,102 (35.2%)
	TOTAL	269 (100.0%)	1,671 (100.0%)	1,188 (100.0%)	3,128 (100.0%)

Table A.7. CONT'D Distribution of planted agricultural land by district and household disability status.

DISTRICT	ANY MEMBER PLANTED	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
SOUTH EAST	Planted	111 (22.2%)	1,887 (31.7%)	776 (31.9%)	2,774 (31.2%)
	Look After	2 (0.4%)	75 (1.3%)	20 (0.8%)	97 (1.1%)
	Both Plant and Look After	108 (21.6%)	725 (12.2%)	300 (12.3%)	1,133 (12.8%)
	No	278 (55.7%)	3,263 (54.8%)	1,338 (55.0%)	4,879 (54.9%)
	TOTAL	499 (100.0%)	5,950 (100.0%)	2,434 (100.0%)	8,883 (100.0%)
KWENENG EAST	Planted	603 (35.4%)	7,037 (40.6%)	3,800 (41.2%)	11,440 (40.5%)
	Look After	14 (0.8%)	477 (2.8%)	108 (1.2%)	599 (2.1%)
	Both Plant and Look After	329 (19.3%)	2,269 (13.1%)	1,364 (14.8%)	3,962 (14.0%)
	No	756 (44.4%)	7,532 (43.5%)	3,956 (42.9%)	12,244 (43.3%)
	TOTAL	1,702 (100.0%)	17,315 (100.0%)	9,228 (100.0%)	28,245 (100.0%)
KWENENG WEST	Planted	249 (29.3%)	1,414 (31.1%)	991 (29.5%)	2,654 (30.3%)
	Look After	25 (2.9%)	228 (5.0%)	87 (2.6%)	340 (3.9%)
	Both Plant and Look After	277 (32.6%)	1,376 (30.2%)	1,179 (35.1%)	2,832 (32.3%)
	No	299 (35.2%)	1,531 (33.7%)	1,104 (32.8%)	2,934 (33.5%)
	TOTAL	850 (100.0%)	4,549 (100.0%)	3,361 (100.0%)	8,760 (100.0%)
KGATLENG (Wards)	Planted	239 (34.8%)	2,929 (36.2%)	1,472 (39.3%)	4,640 (37.0%)
	Look After	5 (0.7%)	351 (4.3%)	44 (1.2%)	400 (3.2%)
	Both Plant and Look After	110 (16.0%)	1,249 (15.4%)	524 (14.0%)	1,883 (15.0%)
	No	332 (48.4%)	3,571 (44.1%)	1,705 (45.5%)	5,608 (44.8%)
	TOTAL	686 (100.0%)	8,100 (100.0%)	3,745 (100.0%)	12,531 (100.0%)
CENTRAL SEROWE -PALAPYE	Planted	517 (32.1%)	5,375 (36.8%)	3,393 (38.7%)	9,285 (37.2%)
	Look After	15 (0.9%)	439 (3.0%)	120 (1.4%)	574 (2.3%)
	Both Plant and Look After	317 (19.7%)	2,524 (17.3%)	1,729 (19.7%)	4,570 (18.3%)
	No	760 (47.2%)	6,281 (43.0%)	3,518 (40.2%)	10,559 (42.3%)
	TOTAL	1,609 (100.0%)	14,619 (100.0%)	8,760 (100.0%)	24,988 (100.0%)

Table A.7. CONT'D Distribution of planted agricultural land by district and household disability status.

DISTRICT	ANY MEMBER PLANTED	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
CENTRAL MAHALAPYE	Planted	474 (34.7%)	3,894 (37.5%)	2,574 (38.8%)	6,942 (37.8%)
	Look After	9 (0.7%)	261 (2.5%)	67 (1.0%)	337 (1.8%)
	Both Plant and Look After	393 (28.8%)	2,811 (27.0%)	2,080 (31.4%)	5,284 (28.7%)
	No	490 (35.9%)	3,430 (33.0%)	1,906 (28.8%)	5,826 (31.7%)
	TOTAL	1,366 (100.0%)	10,396 (100.0%)	6,627 (100.0%)	18,389 (100.0%)
CENTRAL BOBONONG	Planted	323 (40.1%)	3,325 (44.1%)	2,241 (46.4%)	5,889 (44.7%)
	Look After	4 (0.5%)	120 (1.6%)	37 (0.8%)	161 (1.2%)
	Both Plant and Look After	158 (19.6%)	1,419 (18.8%)	1,027 (21.2%)	2,604 (19.8%)
	No	320 (39.8%)	2,679 (35.5%)	1,529 (31.6%)	4,528 (34.3%)
	TOTAL	805 (100.0%)	7,543 (100.0%)	4,834 (100.0%)	13,182 (100.0%)
CENTRAL BOTETI	Planted	152 (38.9%)	1,938 (41.0%)	1,243 (42.6%)	3,333 (41.5%)
	Look After	4 (1.0%)	57 (1.2%)	32 (1.1%)	93 (1.2%)
	Both Plant and Look After	57 (14.6%)	667 (14.1%)	469 (16.1%)	1,193 (14.8%)
	No	178 (45.5%)	2,067 (43.7%)	1,176 (40.3%)	3,421 (42.5%)
	TOTAL	391 (100.0%)	4,729 (100.0%)	2,920 (100.0%)	8,040 (100.0%)
CENTRAL TUTUME	Planted	613 (40.1%)	5,892 (44.7%)	3,626 (44.9%)	10,131 (44.5%)
	Look After	15 (1.0%)	364 (2.8%)	124 (1.5%)	503 (2.2%)
	Both Plant and Look After	293 (19.2%)	2,389 (18.1%)	1,658 (20.5%)	4,340 (19.1%)
	No	606 (39.7%)	4,522 (34.3%)	2,672 (33.1%)	7,800 (34.2%)
	TOTAL	1,527 (100.0%)	13,167 (100.0%)	8,080 (100.0%)	22,774 (100.0%)
NORTH EAST	Planted	195 (29.7%)	2,112 (36.9%)	1,253 (37.2%)	3,560 (36.5%)
	Look After	5 (0.8%)	68 (1.2%)	13 (0.4%)	86 (0.9%)
	Both Plant and Look After	204 (31.1%)	1,470 (25.7%)	1,042 (30.9%)	2,716 (27.8%)
	No	252 (38.4%)	2,080 (36.3%)	1,064 (31.6%)	3,396 (34.8%)
	Total	656 (100.0%)	5,730 (100.0%)	3,372 (100.0%)	9,758 (100.0%)

Table A.7. CONT'D Distribution of planted agricultural land by district and household disability status.

DISTRICT	ANY MEMBER PLANTED	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
NGAMILAND EAST	Planted	218 (33.7%)	2,506 (38.8%)	1,769 (37.7%)	4,493 (38.1%)
	Look After	2 (0.3%)	57 (0.9%)	27 (0.6%)	86 (0.7%)
	Both Plant and Look After	148 (22.9%)	896 (13.9%)	728 (15.5%)	1,772 (15.0%)
	No	278 (43.0%)	3,005 (46.5%)	2,170 (46.2%)	5,453 (46.2%)
	TOTAL	646 (100.0%)	6,464 (100.0%)	4,694 (100.0%)	11,804 (100.0%)
NGAMILAND WEST	Planted	207 (33.6%)	1,693 (39.2%)	1,996 (40.0%)	3,896 (39.2%)
	Look After	5 (0.8%)	42 (1.0%)	26 (0.5%)	73 (0.7%)
	Both Plant and Look After	156 (25.3%)	993 (23.0%)	1,319 (26.4%)	2,468 (24.9%)
	No	248 (40.3%)	1,590 (36.8%)	1,655 (33.1%)	3,493 (35.2%)
	TOTAL	616 (100.0%)	4,318 (100.0%)	4,996 (100.0%)	9,930 (100.0%)
Chobe	Planted	41 (32.5%)	683 (34.6%)	286 (35.0%)	1,010 (34.6%)
	Look After	1 (0.8%)	47 (2.4%)	6 (0.7%)	54 (1.9%)
	Both Plant and Look After	9 (7.1%)	177 (9.0%)	86 (10.5%)	272 (9.3%)
	No	75 (59.5%)	1,066 (54.0%)	440 (53.8%)	1,581 (54.2%)
	TOTAL	126 (100.0%)	1,973 (100.0%)	818 (100.0%)	2,917 (100.0%)
DELTA	Planted	12 (66.7%)	40 (72.7%)	42 (63.6%)	94 (67.6%)
	Look After	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Both Plant and Look After	2 (11.1%)	2 (3.6%)	12 (18.2%)	16 (11.5%)
	No	4 (22.2%)	13 (23.6%)	12 (18.2%)	29 (20.9%)
	TOTAL	18 (100.0%)	55 (100.0%)	66 (100.0%)	139 (100.0%)
GHANZI	Planted	73 (31.5%)	639 (34.7%)	435 (34.3%)	1,147 (34.3%)
	Look After	3 (1.3%)	37 (2.0%)	20 (1.6%)	60 (1.8%)
	Both Plant and Look After	40 (17.2%)	270 (14.6%)	238 (18.8%)	548 (16.4%)
	No	116 (50.0%)	898 (48.7%)	574 (45.3%)	1,588 (47.5%)
	TOTAL	232 (100.0%)	1,844 (100.0%)	1,267 (100.0%)	3,343 (100.0%)

Table A.7. CONT'D Distribution of planted agricultural land by district and household disability status.

DISTRICT	ANY MEMBER PLANTED	HOUSEHOLD DISABILITY STATUS			TOTAL
		CASE	CONTROL	NOT STATED	
CKGR	Planted	1 (100.0%)	14 (70.0%)	8 (50.0%)	23 (62.2%)
	Look After	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Both Plant and Look After	0 (0.0%)	1 (5.0%)	1 (6.2%)	2 (5.4%)
	No	0 (0.0%)	5 (25.0%)	7 (43.8%)	12 (32.4%)
	TOTAL	1 (100.0%)	20 (100.0%)	16 (100.0%)	37 (100.0%)
KGALAGADI SOUTH	Planted	34 (22.8%)	281 (24.8%)	171 (25.6%)	486 (25.0%)
	Look After	1 (0.7%)	18 (1.6%)	10 (1.5%)	29 (1.5%)
	Both Plant and Look After	25 (16.8%)	168 (14.9%)	144 (21.6%)	337 (17.3%)
	No	89 (59.7%)	664 (58.7%)	342 (51.3%)	1,095 (56.2%)
	TOTAL	149 (100.0%)	1,131 (100.0%)	667 (100.0%)	1,947 (100.0%)
KGALAGADI NORTH	Planted	33 (22.4%)	285 (24.3%)	178 (26.3%)	496 (24.9%)
	Look After	0 (0.0%)	9 (0.8%)	2 (0.3%)	11 (0.6%)
	Both Plant and Look After	18 (12.2%)	164 (14.0%)	98 (14.5%)	280 (14.0%)
	No	96 (65.3%)	714 (60.9%)	398 (58.9%)	1,208 (60.6%)
	TOTAL	147 (100.0%)	1,172 (100.0%)	676 (100.0%)	1,995 (100.0%)
TOTAL	Planted	5,033 (34.1%)	57,086 (38.9%)	33,571 (39.7%)	95,690 (38.9%)
	Look After	133 (0.9%)	3,146 (2.1%)	863 (1.0%)	4,142 (1.7%)
	Both Plant and Look After	3,049 (20.7%)	23,002 (15.7%)	16,130 (19.1%)	42,181 (17.1%)
	No	6,531 (44.3%)	63,495 (43.3%)	34,000 (40.2%)	104,026 (42.3%)
	TOTAL	14,746 (100.0%)	146,729 (100.0%)	84,564 (100.0%)	246,039 (100.0%)

Table A.8 Mean, standard deviation and factor loading of all variables used to compute wealth index

FACTOR	MEAN	SD	LOADING
e01_livestock_ownership_own	0.293	0.455	0.019
e01_livestock_ownership_both_own_and_look_after	0.11	0.313	-0.101
e01_livestock_ownership_no	0.598	0.49	0.046
e05_land_access_yes	0.354	0.478	-0.076
e05_land_access_no	0.646	0.478	0.076
e11_type_of_housing_unit_traditional	0.056	0.231	-0.184
e11_type_of_housing_unit_mixed	0.148	0.356	-0.103
e11_type_of_housing_unit_detached	0.479	0.5	0.146
e11_type_of_housing_unit_semi_detached	0.072	0.259	0.088
e11_type_of_housing_unit_rooms	0.209	0.406	0.002
e12_wall_material_main_house_conventional_bricks_blocks	0.871	0.334	0.216
e12_wall_material_main_house_mud	0.087	0.282	-0.183
e12_wall_material_main_house_others	0.041	0.198	-0.104
e13_floor_material_cement	0.574	0.493	-0.1
e13_floor_material_floor_tiles_wood	0.353	0.478	0.212
e13_floor_material_others	0.056	0.229	-0.182
e14_roofing_material_main_house_roof_tiles	0.174	0.379	0.141
e14_roofing_material_main_house_corrugated_iron_zinc_tin	0.772	0.418	-0.059
e14_roofing_material_main_house_others	0.052	0.223	-0.129
e15_tenure_of_housing_unit_self_built	0.379	0.485	-0.116
e15_tenure_of_housing_unit_family_home	0.161	0.367	-0.023
e15_tenure_of_housing_unit_rent_individual	0.284	0.45	0.109
e15_tenure_of_housing_unit_rent_others	0.076	0.265	0.095
e15_tenure_of_housing_unit_free	0.095	0.293	-0.031
e17a_main_source_wuc	0.848	0.359	0.172
e17a_main_source_improved	0.128	0.334	-0.155
e17a_main_source_unimproved	0.023	0.151	-0.065
e19_toilet_availability_improved	0.61	0.488	0.127
e19_toilet_availability_unimproved	0.28	0.449	0.011
e19_toilet_availability_none	0.11	0.312	-0.214
e22_refuse_disposal_regularly_collected	0.493	0.5	0.201
e22_refuse_disposal_irregularly_collected	0.056	0.23	0.013
e22_refuse_disposal_others	0.451	0.498	-0.209
e24a_principal_energy_cooking_electricity	0.259	0.438	0.129
e24a_principal_energy_cooking_lpg	0.349	0.477	0.124
e24a_principal_energy_cooking_wood	0.297	0.457	-0.257
e24a_principal_energy_cooking_other	0.095	0.294	0.007
e25_principal_energy_heating_space_electricity	0.304	0.46	0.171
e25_principal_energy_heating_space_wood	0.252	0.434	-0.208
e25_principal_energy_heating_space_other	0.05	0.217	0.006
e27_durables_01	0.116	0.32	0.065
e27_durables_02	0.341	0.474	0.164
e27_durables_08	0.325	0.468	-0.017

Table A.8 CONT'D Mean, standard deviation and factor loading of all variables used to compute wealth index

FACTOR	MEAN	SD	LOADING
e27_durables_10	0.227	0.419	0.174
e27_durables_11	0.921	0.27	0.066
e27_durables_17	0.63	0.483	0.236
e27_durables_18	0.609	0.488	0.082
e27_durables_19	0.401	0.49	0.163
e27_durables_20	0.608	0.488	0.224
e28_internet_connectivity_yes	0.413	0.492	0.177
e28_internet_connectivity_no	0.575	0.494	-0.171
individuals_per_room	1.653	1.358	-0.085

Table A.9. Distribution of households by wealth quintiles, district, and household disability status.

DISTRICT	TYPE OF HOUSEHOLD	WEALTH QUINTILES					TOTAL
		POOR	LOW MIDDLE	MIDDLE	UPPER MIDDLE		
GABORONE	Case	9 (0.6%)	174 (10.7%)	360 (22.2%)	398 (24.6%)	680 (41.9%)	1,621 (100.0%)
	Control	111 (0.2%)	4,193 (6.8%)	12,013 (19.4%)	15,995 (25.9%)	29,535 (47.8%)	61,847 (100.0%)
	Not Stated	48 (0.3%)	1,270 (6.8%)	3,123 (16.6%)	4,112 (21.9%)	10,231 (54.5%)	18,784 (100.0%)
	TOTAL	168 (0.2%)	5,637 (6.9%)	15,496 (18.8%)	20,505 (24.9%)	40,446 (49.2%)	82,252 (100.0%)
FRANCISTOWN	Case	8 (0.9%)	145 (17.1%)	213 (25.1%)	278 (32.8%)	204 (24.1%)	848 (100.0%)
	Control	80 (0.3%)	2,217 (9.6%)	5,994 (25.8%)	7,342 (31.6%)	7,578 (32.6%)	23,211 (100.0%)
	Not Stated	54 (0.6%)	1,181 (12.3%)	2,384 (24.7%)	2,846 (29.5%)	3,173 (32.9%)	9,638 (100.0%)
	TOTAL	142 (0.4%)	3,543 (10.5%)	8,591 (25.5%)	10,466 (31.1%)	10,955 (32.5%)	33,697 (100.0%)
LOBATSE	Case	5 (1.5%)	100 (30.9%)	94 (29.0%)	88 (27.2%)	37 (11.4%)	324 (100.0%)
	Control	30 (0.4%)	1,212 (17.7%)	2,119 (31.0%)	1,871 (27.4%)	1,607 (23.5%)	6,839 (100.0%)
	Not Stated	27 (1.0%)	573 (21.6%)	701 (26.5%)	695 (26.3%)	651 (24.6%)	2,647 (100.0%)
	TOTAL	62 (0.6%)	1,885 (19.2%)	2,914 (29.7%)	2,654 (27.1%)	2,295 (23.4%)	9,810 (100.0%)
SELIBE PHIKWE	Case	4 (1.3%)	85 (26.9%)	76 (24.1%)	86 (27.2%)	65 (20.6%)	316 (100.0%)
	Control	59 (0.7%)	984 (10.9%)	2,242 (24.8%)	2,893 (31.9%)	2,880 (31.8%)	9,058 (100.0%)
	Not Stated	40 (1.0%)	529 (13.5%)	907 (23.2%)	1,283 (32.8%)	1,155 (29.5%)	3,914 (100.0%)
	TOTAL	103 (0.8%)	1,598 (12.0%)	3,225 (24.3%)	4,262 (32.1%)	4,100 (30.9%)	13,288 (100.0%)
ORAPA	Case	0 (0.0%)	0 (0.0%)	1 (5.0%)	1 (5.0%)	18 (90.0%)	20 (100.0%)
	Control	0 (0.0%)	19 (0.8%)	268 (11.8%)	592 (26.1%)	1,390 (61.3%)	2,269 (100.0%)
	Not Stated	0 (0.0%)	4 (0.5%)	23 (3.1%)	126 (16.7%)	600 (79.7%)	753 (100.0%)
	TOTAL	0 (0.0%)	23 (0.8%)	292 (9.6%)	719 (23.6%)	2,008 (66.0%)	3,042 (100.0%)

Table A.9.CONT'D Distribution of households by wealth quintiles, district, and household disability status.

DISTRICT	TYPE OF HOUSEHOLD	WEALTH QUINTILES					TOTAL
		POOR	LOW MIDDLE	MIDDLE	UPPER MIDDLE		
JWANENG	Case	1 (1.1%)	19 (21.1%)	20 (22.2%)	22 (24.4%)	28 (31.1%)	90 (100.0%)
	Control	23 (0.5%)	187 (3.9%)	698 (14.7%)	1,365 (28.7%)	2,490 (52.3%)	4,763 (100.0%)
	Not Stated	1 (0.1%)	73 (4.2%)	164 (9.5%)	355 (20.7%)	1,125 (65.5%)	1,718 (100.0%)
	TOTAL	25 (0.4%)	279 (4.2%)	882 (13.4%)	1,742 (26.5%)	3,643 (55.4%)	6,571 (100.0%)
SOWA	Case	0 (0.0%)	0 (0.0%)	2 (11.8%)	11 (64.7%)	4 (23.5%)	17 (100.0%)
	Control	0 (0.0%)	7 (0.9%)	84 (10.5%)	340 (42.6%)	367 (46.0%)	798 (100.0%)
	Not Stated	0 (0.0%)	2 (0.7%)	28 (9.8%)	120 (42.0%)	136 (47.6%)	286 (100.0%)
	TOTAL	0 (0.0%)	9 (0.8%)	114 (10.4%)	471 (42.8%)	507 (46.0%)	1,101 (100.0%)
SOUTHERN	Case	508 (27.1%)	686 (36.6%)	398 (21.3%)	207 (11.1%)	73 (3.9%)	1,872 (100.0%)
	Control	5,944 (25.9%)	5,771 (25.2%)	5,040 (22.0%)	3,902 (17.0%)	2,254 (9.8%)	22,911 (100.0%)
	Not Stated	3,131 (24.2%)	3,919 (30.3%)	2,958 (22.9%)	2,031 (15.7%)	889 (6.9%)	12,928 (100.0%)
	TOTAL	9,583 (25.4%)	10,376 (27.5%)	8,396 (22.3%)	6,140 (16.3%)	3,216 (8.5%)	37,711 (100.0%)
BAROLONG	Case	392 (31.1%)	548 (43.5%)	175 (13.9%)	117 (9.3%)	27 (2.1%)	1,259 (100.0%)
	Control	2,855 (29.9%)	2,830 (29.6%)	1,728 (18.1%)	1,444 (15.1%)	691 (7.2%)	9,548 (100.0%)
	Not Stated	1,877 (33.3%)	1,996 (35.4%)	923 (16.4%)	591 (10.5%)	244 (4.3%)	5,631 (100.0%)
	TOTAL	5,124 (31.2%)	5,374 (32.7%)	2,826 (17.2%)	2,152 (13.1%)	962 (5.9%)	16,438 (100.0%)
NGWAKETSE WEST	Case	299 (66.9%)	114 (25.5%)	21 (4.7%)	10 (2.2%)	3 (0.7%)	447 (100.0%)
	Control	2,132 (55.6%)	777 (20.3%)	322 (8.4%)	329 (8.6%)	272 (7.1%)	3,832 (100.0%)
	Not Stated	1,460 (64.0%)	507 (22.2%)	148 (6.5%)	99 (4.3%)	69 (3.0%)	2,283 (100.0%)
	TOTAL	3,891 (59.3%)	1,398 (21.3%)	491 (7.5%)	438 (6.7%)	344 (5.2%)	6,562 (100.0%)

Table A.9.CONT'D Distribution of households by wealth quintiles, district, and household disability status.

DISTRICT	TYPE OF HOUSEHOLD	WEALTH QUINTILES					TOTAL
		POOR	LOW MIDDLE	MIDDLE	UPPER MIDDLE		
SOUTH EAST	Case	106 **(8.3%)**	176 **(13.8%)**	285 **(22.4%)**	374 (29.4%)	330 (26.0%)	1,271 **(100.0%)**
	Control	1,126 **(4.4%)**	1,963 **(7.6%)**	5,484 **(21.2%)**	8,082 **(31.3%)**	9,193 **(35.6%)**	25,848 **(100.0%)**
	Not Stated	261 **(2.9%)**	878 **(9.7%)**	1,859 **(20.5%)**	2,479 **(27.3%)**	3,601 **(39.7%)**	9,078 **(100.0%)**
	TOTAL	1,493 **(4.1%)**	3,017 **(8.3%)**	7,628 **(21.1%)**	10,935 **(30.2%)**	13,124 **(36.3%)**	36,197 **(100.0%)**
KWENENG EAST	Case	722 **(19.5%)**	989 **(26.7%)**	860 **(23.2%)**	757 **(20.4%)**	382 **(10.3%)**	3,710 **(100.0%)**
	Control	7,471 **(11.2%)**	10,660 **(16.0%)**	17,476 **(26.3%)**	18,173 **(27.3%)**	12,739 **(19.2%)**	66,519 **(100.0%)**
	Not Stated	3,788 **(12.6%)**	6,324 **(21.0%)**	7,644 **(25.4%)**	7,127 **(23.7%)**	5,215 **(17.3%)**	30,098 **(100.0%)**
	TOTAL	11,981 **(11.9%)**	17,973 **(17.9%)**	25,980 **(25.9%)**	26,057 **(26.0%)**	18,336 **(18.3%)**	100,327 **(100.0%)**
KWENENG WEST	Case	711 **(58.9%)**	367 **(30.4%)**	79 **(6.5%)**	24 **(2.0%)**	26 **(2.2%)**	1,207 **(100.0%)**
	Control	4,936 **(54.4%)**	1,711 **(18.9%)**	737 **(8.1%)**	840 **(9.3%)**	849 **(9.4%)**	9,073 **(100.0%)**
	Not Stated	3,315 **(59.3%)**	1,452 **(26.0%)**	331 **(5.9%)**	264 **(4.7%)**	224 **(4.0%)**	5,586 **(100.0%)**
	TOTAL	8,962 **(56.5%)**	3,530 **(22.2%)**	1,147 **(7.2%)**	1,128 **(7.1%)**	1,099 **(6.9%)**	15,866 **(100.0%)**
KGATLENG (Wards)	Case	257 **(18.3%)**	372 **(26.5%)**	364 **(25.9%)**	260 **(18.5%)**	150 **(10.7%)**	1,403 **(100.0%)**
	Control	4,306 **(17.8%)**	4,535 **(18.8%)**	5,213 **(21.6%)**	5,463 **(22.6%)**	4,609 **(19.1%)**	24,126 **(100.0%)**
	Not Stated	1,277 **(11.7%)**	2,497 **(22.9%)**	2,548 **(23.4%)**	2,512 **(23.1%)**	2,050 **(18.8%)**	10,884 **(100.0%)**
	TOTAL	5,840 **(16.0%)**	7,404 **(20.3%)**	8,125 **(22.3%)**	8,235 **(22.6%)**	6,809 **(18.7%)**	36,413 **(100.0%)**
CENTRAL SEROWE -PALAPYE	Case	867 **(32.0%)**	879 **(32.4%)**	504 **(18.6%)**	320 **(11.8%)**	140 **(5.2%)**	2,710 **(100.0%)**
	Control	8,809 **(24.9%)**	7,956 **(22.5%)**	7,116 **(20.1%)**	6,299 **(17.8%)**	5,189 **(14.7%)**	35,369 **(100.0%)**
	Not Stated	5,811 **(31.0%)**	5,387 **(28.7%)**	3,302 **(17.6%)**	2,450 **(13.1%)**	1,814 **(9.7%)**	18,764 **(100.0%)**
	TOTAL	15,487 **(27.2%)**	14,222 **(25.0%)**	10,922 **(19.2%)**	9,069 **(16.0%)**	7,143 **(12.6%)**	56,843 **(100.0%)**

Table A.9.CONT'D Distribution of households by wealth quintiles, district, and household disability status.

DISTRICT	TYPE OF HOUSEHOLD	WEALTH QUINTILES					TOTAL
		POOR	LOW MIDDLE	MIDDLE	UPPER MIDDLE		
CENTRAL MAHALAPYE	Case	891 **(38.5%)**	795 **(34.3%)**	362 **(15.6%)**	206 **(8.9%)**	63 **(2.7%)**	2,317 **(100.0%)**
	Control	7,474 **(34.5%)**	5,370 **(24.8%)**	3,574 **(16.5%)**	2,980 **(13.7%)**	2,289 (10.6%)	21,687 **(100.0%)**
	Not Stated	4,740 **(37.8%)**	3,891 **(31.0%)**	1,930 **(15.4%)**	1,201 **(9.6%)**	788 **(6.3%)**	12,550 **(100.0%)**
	TOTAL	13,105 **(35.9%)**	10,056 **(27.5%)**	5,866 **(16.0%)**	4,387 **(12.0%)**	3,140 **(8.6%)**	36,554 **(100.0%)**
CENTRAL BOBONONG	Case	372 **(34.3%)**	434 **(40.0%)**	168 **(15.5%)**	79 **(7.3%)**	31 **(2.9%)**	1,084 **(100.0%)**
	Control	4,094 **(30.8%)**	3,711 **(27.9%)**	2,550 **(19.2%)**	1,909 **(14.4%)**	1,038 **(7.8%)**	13,302 **(100.0%)**
	Not Stated	2,654 **(34.4%)**	2,672 **(34.6%)**	1,250 **(16.2%)**	790 **(10.2%)**	357 **(4.6%)**	7,723 **(100.0%)**
	TOTAL	7,120 **(32.2%)**	6,817 **(30.8%)**	3,968 **(17.9%)**	2,778 **(12.6%)**	1,426 **(6.4%)**	22,109 **(100.0%)**
CENTRAL BOTETI	Case	396 **(53.2%)**	181 **(24.3%)**	112 **(15.0%)**	35 **(4.7%)**	21 **(2.8%)**	745 **(100.0%)**
	Control	3,788 **(28.1%)**	3,030 **(22.4%)**	2,817 **(20.9%)**	2,239 **(16.6%)**	1,624 **(12.0%)**	13,498 **(100.0%)**
	Not Stated	2,888 **(41.4%)**	1,690 **(24.2%)**	1,126 **(16.2%)**	779 **(11.2%)**	489 **(7.0%)**	6,972 **(100.0%)**
	TOTAL	7,072 **(33.3%)**	4,901 **(23.1%)**	4,055 **(19.1%)**	3,053 **(14.4%)**	2,134 **(10.1%)**	21,215 **(100.0%)**
CENTRAL TUTUME	Case	1,031 **(40.1%)**	939 **(36.5%)**	357 **(13.9%)**	201 **(7.8%)**	45 **(1.7%)**	2,573 **(100.0%)**
	Control	8,110 **(29.3%)**	8,438 **(30.5%)**	5,389 **(19.5%)**	3,910 **(14.1%)**	1,810 **(6.5%)**	27,657 **(100.0%)**
	Not Stated	6,084 **(37.4%)**	5,472 **(33.6%)**	2,514 **(15.5%)**	1,626 **(10.0%)**	572 **(3.5%)**	16,268 **(100.0%)**
	TOTAL	15,225 **(32.7%)**	14,849 **(31.9%)**	8,260 **(17.8%)**	5,737 **(12.3%)**	2,427 **(5.2%)**	46,498 **(100.0%)**
NORTH EAST	Case	157 **(16.5%)**	419 **(44.0%)**	190 **(19.9%)**	133 **(14.0%)**	54 **(5.7%)**	953 **(100.0%)**
	Control	1,533 **(11.8%)**	3,596 **(27.6%)**	2,692 **(20.7%)**	2,726 **(20.9%)**	2,471 **(19.0%)**	13,018 **(100.0%)**
	Not Stated	1,040 **(15.1%)**	2,317 **(33.7%)**	1,339 **(19.5%)**	1,211 **(17.6%)**	965 **(14.0%)**	6,872 **(100.0%)**
	TOTAL	2,730 **(13.1%)**	6,332 **(30.4%)**	4,221 **(20.3%)**	4,070 **(19.5%)**	3,490 **(16.7%)**	20,843 **(100.0%)**

Table A.9.CONT'D Distribution of households by wealth quintiles, district, and household disability status.

DISTRICT	TYPE OF HOUSEHOLD	WEALTH QUINTILES					TOTAL
		POOR	LOW MIDDLE	MIDDLE	UPPER MIDDLE		
NGAMILAND EAST	Case	563 (42.7%)	325 (24.6%)	186 (14.1%)	169 (12.8%)	77 (5.8%)	1,320 (100.0%)
	Control	4,101 (22.3%)	3,765 (20.5%)	4,147 (22.5%)	3,489 (19.0%)	2,893 (15.7%)	18,395 (100.0%)
	Not Stated	3,411 (29.3%)	2,829 (24.3%)	2,238 (19.2%)	1,781 (15.3%)	1,384 (11.9%)	11,643 (100.0%)
	TOTAL	8,075 (25.8%)	6,919 (22.1%)	6,571 (21.0%)	5,439 (17.3%)	4,354 (13.9%)	31,358 (100.0%)
NGAMILAND WEST	Case	725 (74.3%)	183 (18.8%)	35 (3.6%)	24 (2.5%)	9 (0.9%)	976 (100.0%)
	Control	4,381 (49.9%)	1,666 (19.0%)	1,022 (11.6%)	967 (11.0%)	737 (8.4%)	8,773 (100.0%)
	Not Stated	5,563 (69.2%)	1,454 (18.1%)	470 (5.8%)	347 (4.3%)	206 (2.6%)	8,040 (100.0%)
	TOTAL	10,669 (60.0%)	3,303 (18.6%)	1,527 (8.6%)	1,338 (7.5%)	952 (5.4%)	17,789 (100.0%)
Chobe	Case	63 (22.1%)	80 (28.1%)	60 (21.1%)	52 (18.2%)	30 (10.5%)	285 (100.0%)
	Control	645 (9.0%)	1,263 (17.7%)	1,721 (24.1%)	2,101 (29.4%)	1,414 (19.8%)	7,144 (100.0%)
	Not Stated	297 (11.3%)	575 (21.8%)	657 (24.9%)	684 (25.9%)	424 (16.1%)	2,637 (100.0%)
	TOTAL	1,005 (10.0%)	1,918 (19.1%)	2,438 (24.2%)	2,837 (28.2%)	1,868 (18.6%)	10,066 (100.0%)
DELTA	Case	21 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	21 (100.0%)
	Control	76 (93.8%)	5 (6.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	81 (100.0%)
	Not Stated	86 (97.7%)	2 (2.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	88 (100.0%)
	TOTAL	183 (96.3%)	7 (3.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	190 (100.0%)
GHANZI	Case	305 (39.7%)	262 (34.1%)	95 (12.4%)	68 (8.8%)	39 (5.1%)	769 (100.0%)
	Control	2,779 (31.5%)	1,787 (20.2%)	1,518 (17.2%)	1,426 (16.1%)	1,326 (15.0%)	8,836 (100.0%)
	Not Stated	2,320 (42.2%)	1,103 (20.1%)	758 (13.8%)	666 (12.1%)	648 (11.8%)	5,495 (100.0%)
	TOTAL	5,404 (35.8%)	3,152 (20.9%)	2,371 (15.7%)	2,160 (14.3%)	2,013 (13.3%)	15,100 (100.0%)

Table A.9.CONT'D Distribution of households by wealth quintiles, district, and household disability status.

DISTRICT	TYPE OF HOUSEHOLD	WEALTH QUINTILES					TOTAL
		POOR	LOW MIDDLE	MIDDLE	UPPER MIDDLE		
CKGR	Case	6 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	6 (100.0%)
	Control	35 (79.5%)	1 (2.3%)	0 (0.0%)	6 (13.6%)	2 (4.5%)	44 (100.0%)
	Not Stated	31 (96.9%)	0 (0.0%)	1 (3.1%)	0 (0.0%)	0 (0.0%)	32 (100.0%)
	TOTAL	72 (87.8%)	1 (1.2%)	1 (1.2%)	6 (7.3%)	2 (2.4%)	82 (100.0%)
KGALAGADI SOUTH	Case	220 (38.0%)	201 (34.7%)	85 (14.7%)	39 (6.7%)	34 (5.9%)	579 (100.0%)
	Control	1,825 (31.4%)	1,403 (24.1%)	931 (16.0%)	816 (14.0%)	838 (14.4%)	5,813 (100.0%)
	Not Stated	1,423 (42.7%)	892 (26.8%)	430 (12.9%)	337 (10.1%)	248 (7.4%)	3,330 (100.0%)
	TOTAL	3,468 (35.7%)	2,496 (25.7%)	1,446 (14.9%)	1,192 (12.3%)	1,120 (11.5%)	9,722 (100.0%)
KGALAGADI NORTH	Case	131 (32.7%)	138 (34.4%)	59 (14.7%)	55 (13.7%)	18 (4.5%)	401 (100.0%)
	Control	1,101 (24.6%)	1,125 (25.1%)	799 (17.9%)	696 (15.5%)	755 (16.9%)	4,476 (100.0%)
	Not Stated	735 (32.5%)	675 (29.8%)	345 (15.3%)	249 (11.0%)	258 (11.4%)	2,262 (100.0%)
	TOTAL	1,967 (27.6%)	1,938 (27.1%)	1,203 (16.9%)	1,000 (14.0%)	1,031 (14.4%)	7,139 (100.0%)
TOTAL	Case	8,770 -30%	8,611 -30%	5,161 -18%	4,014 -14%	2,588 -9%	29,144 -100%
	Control	77,824 -17%	80,182 -18%	93,694 -21%	98,195 -22%	98,840 -22%	448,735 (100.0%)
	Not Stated	52,362 -24%	50,164 -23%	40,101 (18.5%)	36,761 -17%	37,516 -17%	216,904 (100.0%)
	TOTAL	138,956 (20.0%)	138,957 (20.0%)	138,956 (20.0%)	138,970 (20.0%)	138,944 (20.0%)	694,783 (100.0%)

PROFILE OF PEOPLE WITH DISABILITY IN BOTSWANA (PWD)

Mavis Mogami and Goaletsa B. Kesetse

EXECUTIVE SUMMARY

This paper aims to provide a profile of people living with disability (PWDs) in Botswana from the 2022 Population and Housing Census. This will afford an understanding of PWD's in terms of their characteristics, types of disabilities they have and their distribution in the country. This plays an important role in the development and review of policies programs and frameworks. The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) is an international treaty that's specific to people with disabilities. It was adopted by the United Nations in 2006 and Botswana signed and ratified in 2021. This convention articulates and asserts the application of disability rights instruments to PWDs.

The United Nations member states, including Botswana adopted The 2030 Agenda for Sustainable Development which prioritizes the principles of equality and non-discrimination, with a commitment to "leave no one behind" and "reach those furthest behind first". It commits that special attention should be given to marginalized groups, which include people with disabilities

The Constitution of Botswana does not have any specific a specific legislation on disability, however, the country has The1996 National Policy on Care for People with Disabilities [NPCPD]), that recognizes the importance of disability rights and dignity for all individuals. It focuses on accessibility to education, health facilities and inclusion in the employment sector and other government programs.

This analysis employed the use of SPSS and is based on Population and Housing Census (2022) data. This is the first census conducted since Botswana adopted the Washington Group on Disability set of questions and according to Washington Group on Disability Statistics, disability is understood as a continuum

The analysis explores and presents the profile of people with disability in relation to demographic and social characteristics, educational and economic characteristics and access to ICT. Most part of this report presents statistics of PWD's in comparison to their counterparts without disability. This will be useful for evidence based development of disability-inclusive policies and programs and also providing targeted and appropriate service. As mentioned earlier 2023 Agenda pledged to leave no one behind, these statistics are key in monitoring progress and meeting that goal.

Overall results indicate that the national disability prevalence has dropped from 2.9 percent to 2.7 percent. While the prevalence rate show the same pattern for national and male rates, the prevalence rate for females has increased from 2.9 percent to 3 percent. Prevalence rate for males have dropped significantly from 3percent to 2.3 percent. The results also show that disability prevalence rate increases with age as it is lowest. 1percent for people aged 0-34 and its highest at 40percent for people aged 85 years and over.

The highest percentage (27.5) of PWD's have difficulty in seeing while the lowest percentage (7.8) have difficulty with communication. A comparison of PWD's and those without with regards to school attendance has revealed that there is disparity between the two groups, with one at 50 percent and the other at 83 percent respectively. The employment sector also shows the same pattern. Only 28.9 percent of PWD's had done some type of work for pay or profit compared to 43.8 percent of those without disabilities.

INTRODUCTION

History has shown that exclusion, discrimination, and stigmatization have been global issues, particularly regarding access to education and employment opportunities for people with disabilities (PWDs). Botswana is no exception to this trend, as individuals with disabilities face significant barriers to education, employment, and community engagement. However, recent shifts in perspectives around disability have led to the development and prioritization of treaties, policies, and programs aimed at promoting inclusivity for PWDs in various socio-economic aspects. In 2021, Botswana signed and ratified the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), which outlines and affirms the application of disability rights instruments to PWDs. By signing this convention, countries are expected to review existing legislation, policies, and programs to ensure alignment with the UNCRPD framework.

Although Botswana's Constitution lacks specific legislation protecting the rights of people with disabilities, the 1996 National Policy on Care for People with Disabilities (NPCPD) acknowledges the importance of disability rights and the dignity of all individuals. This policy emphasizes the integration of people with disabilities and the need for equal opportunities. The National Policy on Care for people with disabilities recommended a multi-sectoral responsibilities to implement the policy and this gave birth to establishment of an office for people with disabilities within the Office of the President, The National Disability Coordinating Office in 2010. The sole mandate of this establishment was to coordinate disability-related policies and initiatives, which has proven to show a slow progress over the years.

The right to political participation is recognised and promoted by various international instruments that include the International Covenant on Civil and Political Rights (ICCPR), the African Charter on Human and People's Rights (ACHPR) and the United Nations Convention on the Rights of Persons with Disabilities (CRPD), (Suping K, and Moswela E). Notwithstanding people living with disability continue to have barriers that make it difficult for them to fully exercise their political participation right. A voter who is incapacitated by blindness or other physical causes from voting is assisted by the presiding officer to cast their vote according to the wishes of the incapacitated voter in the presence of their aide in case of the visually-impaired voter as outlined in the Electoral act. Absolute privacy and independence when casting a vote in elections, is a constitutional right that is being denied the above mentioned person.

Objectives

The major objective of this report is to analyse and present the results of the 2022 Population and Housing Census focusing on disability in relation to socio-economic demographics. This analysis aims to provide recommendations for national policymakers and assess progress towards achievement of the goal, leave no one behind established under the SDG's.

Specific objectives

To present findings on;

- the national disability prevalence, number of people with disability and the types of disabilities they have
- the demographic characteristics (profile) of persons with disabilities;
- the socio-economic status of people with disabilities compared to those without disabilities

Definitions and Concepts

The definition of disability has been evolving over the years reliant on the global region, context and purpose. It is defined differently by different entities. In layman language disability can be defined as a condition that hinders or makes it more difficult for a person with the condition to do certain activities like the rest of the people. The UN Convention on the Rights of Persons with Disabilities **(UNCRPD)** which recognizes that 'disability is an evolving concept' **(UNCRPD, 2006, p. 1)**, defines persons with disabilities as those who have 'long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others' **(UNCRPD, 2006, p. 4)**.

According to the Washington Group Short Set on functioning, the definition of disability is drawn from the World Health Organization framework, International Classification of Function, Disability and health (ICF), (2002). This framework identifies three component of functioning; Body functioning and structures, activities and participation.

Due to the evolving definition and 2022 PHC having adopted the Washington Group on Disability Statistics short set of questions data collection questions and analysis, the list of disabilities are different from one census to another. In order to identify the population with disability, there is a need to collect data that will provide evidence based statistics. The response categories are to the six question on seeing, hearing, walking, remembering, communicating and self-care are, "No difficult", "yes some difficulty", "yes a lot of difficult" and "Cannot do at all". In this paper disability will be defined by these two categories, "lot of difficulty" and "Cannot do at all" as guided by Washington Group on Disability Statistics.

Disability Trend

The prevalence of disability will be compared between 2011 Population and Housing Census and 2021 Population and Housing Census even though the set of questions used different.

2011 PHC	2022 PHC	
1. Partial sighted	**1**	Seeing
2. Total blindness	**2**	Hearing
3. Partial Hearing	**3**	Communicating
4. Deafnes	**4**	Walking
5. Partial speech impairment	**5**	Remembering
6. Inability to speak	**6**	Selfcare
7. Inability to use one leg		**Response**
8. Inability to use two legs	**1**	No Difficult
9. Inability to use one arm	**2**	Some difficult
10. Inability to use two arms	**3**	A lot of difficult
11. Inability to use the whole body	**4**	Cannot do it all
12. Intellectual impairment		
13. Mental Health Disorder		
14. Missing one leg		
15 .Missing two legs		
16. Missing one arm		
17. Missing two arms		

LITERATURE REVIEW

Though there is dearth of empirical literature about disability in Botswana, Department of Law at the University of Botswana with the assistance of funding from the Open Society Initiative for Southern Africa (OSISA) carried a study on political participation of PWDs in Botswana, led by Suping, K and Moswela, E. This study, titled "Political participation of persons with disabilities in Botswana", came as a result of one of the recommendations of a prior study on Situation Analysis of Disability Rights in the Context of Botswana (2006). The overarching goal of this study was to examine the voting procedures and facilities available for political participation of persons with disabilities in Botswana. One of the major findings was that PWD's are excluded from political and public life as The Constitution of Botswana and the Laws, especially the Electoral Act of 1968 and its amendments do not have any specific provisions directly aimed at protecting and promoting the rights of PWDs in general and their right to political participation.

An analysis of the collected data revealed the experiences of PWDs in their attempt to exercise their right to political participation in Botswana and these are summarized as: rejection, discrimination, lack of recognition and protection by the laws, exploitation by politicians and political parties, as well as voting procedures and facilities that are not favorable to PWDs (Suping K, and Moswela E). This is not in line with Article 29 of CRPD (2006) which provides for 'Participation in Political and Public Life' and holds that "states parties shall guarantee to persons with disabilities political rights and the opportunity to enjoy them on equal basis with others.

Prior to the aforementioned study The Department of Law at the University of Botswana, through OSISA funding, carried out a study titled Situation Analysis of Disability Rights in the Context of Botswana to map out disability rights in Botswana. This study by Mukhopadhyay and E. Moswela, examined the experiences of people with disabilities in exercising disability rights in Botswana and were outlined as follows:

- Physical access to buildings and transport
- Access to education and retention for completion
- Access to health services and equality
- Access to employment and retention in employment
- Access to information and ICTs
- Political participation

The Constitution of Botswana does not a specific legislation on disability. The 1996 National Policy on Care for People with Disabilities [NPCPD]), does recognizes the importance of disability rights and dignity for all individuals and it recommends on the enactment of disability specific legislation. This process has been very slow. According to Mukhopadhyay & Moswela the major limitation of NPCPD is that it was conceptualized based on the medical model and lacks the human rights approach to disability. For example, the policy seems to perceive PWDs as people in need of medical assistance. Therefore, NPCPD has failed to recognize and promote the right of PWDs to political participation. One of their recommendations strongly calls for the ratification and domestication of the UN-CRPD. This can address the inclusivity, equal opportunities and accessibility to education and employment for PWD's.

The 2030 Sustainable Development Goals commit countries to disaggregate the statistics generated by disability, age, geography, sex among others. This is needed to provide important insights about the extent to which PWDs are being included in society, have access to education and employment opportunities and benefit from government programs. Profile and data on PWD's provide evidence based decision making on development of inclusive policies and programs. Moreover it's necessary for monitoring progress in meeting the goal of "leaving no one behind" which is a core principle of the SDG's.

The African Union's (AU) Agenda 2063 aspires to develop inclusive strategies for socio-economic growth that comprehensively includes people with disability (PWDs).

METHODOLOGY

The data used for this report is from the 2022 Population and Housing Census conducted by Statistics Botswana who utilized quantitative approach. The analysis in this report is a descriptive analysis which utilized SPSS package for production of all the statistical tables.

An analysis on the number of persons with disabilities provide a useful evidence base on the development of disability-inclusive policies and programs. It is an enabler for policy makers to design appropriate and adequate programs for PWD's. This also allows for comparison between people with and those without disabilities, and among different groups of people with disabilities.

The ICF framework has three components that describe disability namely impairment of body functioning and structure, limitations on activities and restriction in participation, therefore provides a standardized framework for understanding and classifying different types of disability. The Washington Group Short Set questions on function tool collect information on six types of difficulties thus seeing, hearing, communicating, walking, remembering and self-care for people aged 5 years and above. Each question has 4 responses namely No difficulties, some difficulties, A lot of difficulty and cannot do it all.

ANALYSIS AND DISCUSSIONS

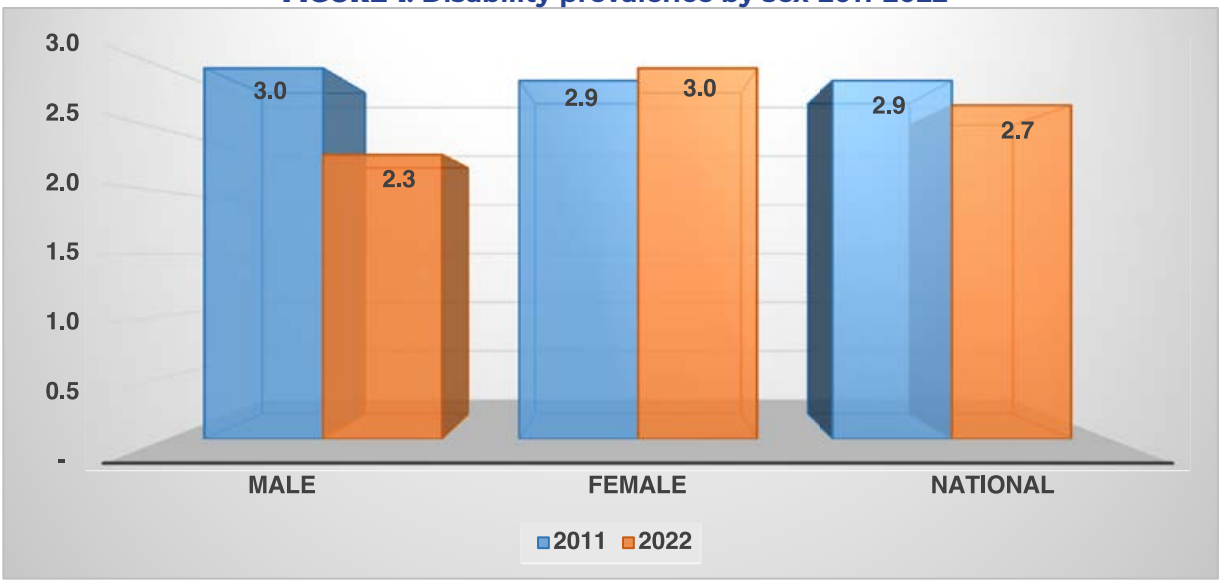
Disability Prevalence

The study utilizes World Health Organization Framework ICF that provides valuable insights into the prevalence of disability within the population showing variations across different demographic indicators, and trends. These insights are key to development of policies and interventions aimed at improving the lives of persons with disabilities and promoting inclusion and accessibility in society. This marks a roadmap towards achieving SDG goal 10 which aims at reduce inequality within and among countries.

The 2022 Population and Housing Census results show that the national disability prevalence rate was 2.7 percent, indicating a decline of 0.2 percent from the 2011 Population and Housing census. The disability prevalence rate for females increased from 2.9 percent in 2011 PHC to 3.0 percent 2022 PHC, while for males the rate decreased from 3.0 percent to 2.33 percent for 2011 PHC to 2022. As supported by Article 6 of the Convention on the Rights of Persons with Disabilities (CRPD), mainstream policies and programmes and initiatives aimed specifically at people with disabilities should have a cross-cutting gender component to ensure the inclusion and empowerment of women and girls with disabilities.

Disability Prevalence by sex

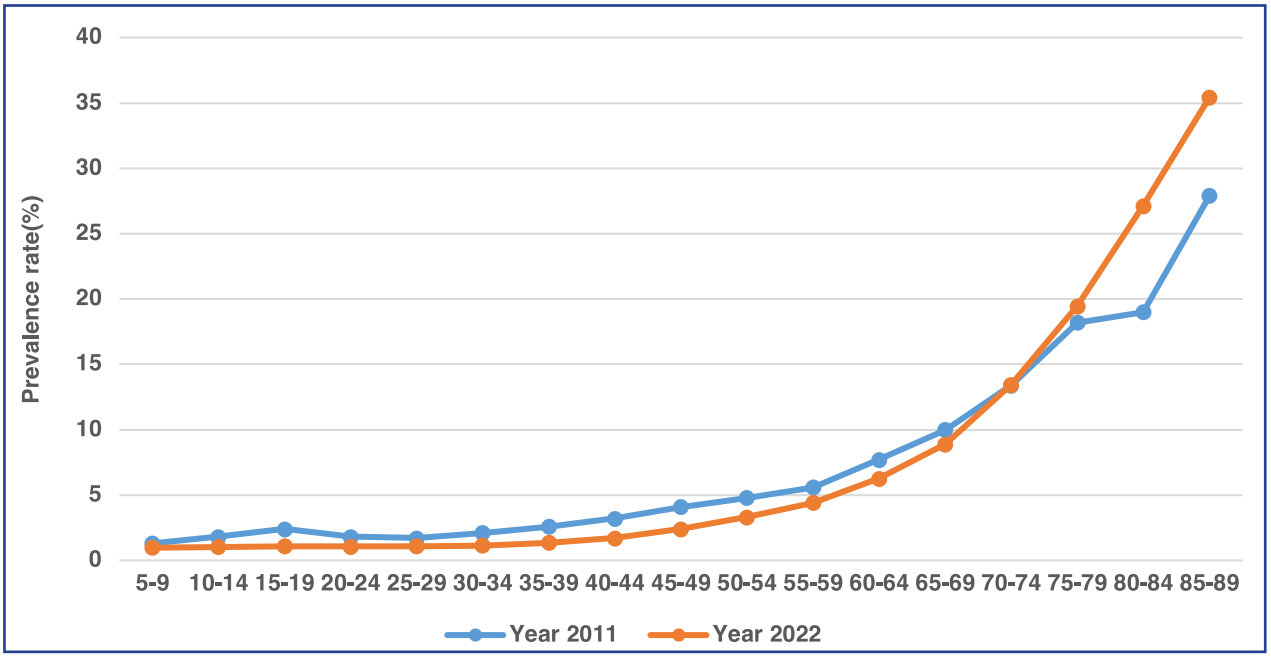
FIGURE 1: Disability prevalence by sex-2011-2022



Disability Prevalence by Age

Figure 2 shows that the disability prevalence rate increases with age. The percentage distribution of person with disability is around 1.0 percent from ages 0-34, and increases to 1.3 percent in age group 35-39. A slight increase of 0.4 percent was recorded between age group 35-39 and age group 40-44. Further a significant increase was observed from age group 40-44 to age group 45-49 by 0.7percent. The increase with age has been consistent for both 2011 and 2022 until age 74 when there was a sharp decrease in 2011. This indicates that disability increases as the age increases and this could partly be attributed to frailty that manifests in the elderly associated with long-term adverse health-related outcomes.

FIGURE 2: Disability prevalence by age -2011-2022



Disability Prevalence by District

According to the **Table 1** below, the number of Persons with disability varies by district. The district with highest prevalence rate Kweneng West with 5.2 percent followed by Barolong with 4.6 percent. Orapa has the lowest prevalence rate of 0.4 percent. This table shows that the prevalence rate for all cities and towns was less than the national prevalence rate, whereas most of the other districts had prevalence rate more that the national rate.

Table 1: Disability Prevalence by District-2022

DISTRICT	WITHOUT DISABILITY	WITH DISABILITY		TOTAL
	NUMBER	NUMBER	PERCENT	
Gaborone	223,191	2,530	1.1	**225,721**
Francistown	89,850	1,550	1.7	**91,400**
Lobatse	25,978	587	2.2	**26,565**
Selibe Phikwe	37,367	511	1.3	**37,878**
Orapa	7,788	33	0.4	**7,821**
Jwaneng	17,041	136	0.8	**17,177**
Sowa	2,965	30	1	**2,995**
Southern	119,684	3,542	2.9	**123,226**
Barolong	49,475	2,390	4.6	**51,865**
Ngwaketse West	19,796	892	4.3	**20,688**
South East	99,574	2,112	2.1	**101,686**
Kweneng East	287,810	6,879	2.3	**294,689**
Kweneng West	47,642	2,611	5.2	**50,253**
Kgatleng	106,790	2,385	2.2	**109,175**
Central Serowe -Palapye	173,218	5,194	2.9	**178,412**
Central Mahalapye	110,123	4,554	4	**114,677**
Central Bobonong	65,199	2,053	3.1	**67,252**
Central Boteti	63,320	1,498	2.3	**64,818**
Central Tutume	139,126	4,836	3.4	**143,962**
North East	59,348	1,698	2.8	**61,046**
Ngamiland East	101,774	2,775	2.7	**104,549**
Ngamiland West	59,827	2,325	3.7	**62,152**
Chobe	24,782	510	2	**25,292**
Delta	2,449	71	2.8	**2,520**
Ghanzi	47,307	1,703	3.5	**49,010**
Kgalagadi South	29,669	1,209	3.9	**30,878**
Kgalagadi North	19,940	733	3.5	**20,673**
TOTAL	**2,031,033**	**55,347**	**2.7**	**2,086,380**

Number of Persons with Disability

Number of people with Disability by Sex and Age

Information on the number of persons gives a complete picture of disability and helps in making informed decisions for medical, policy and public health planning. The 2022 Population and Housing Census results show that the number of persons with disabilities for the population aged 5 years and above, was 55,437 **(Table 2 below)**. The number of persons with disability varies slightly by sex, there were 32,251(3.0%) females with disability and 23,096(2.3%) males. Note that one person may have one or more difficulties therefore 55,347 shows the number of persons with any of the six domains of disability.

The majority of people with disabilities, totaling 26,463 (3.4%), reside in rural areas. In comparison, a smaller number, 5,377 (1.2%), reside in cities or towns. This figure is lower than the 23,507 (2.1%) who reside in urban villages. The highest number of PWDs were in age group 85 and above (7337) followed by age group 80-84 with 4,130 persons with disability. The lowest number observed was in the age group 20-24 with 2064 persons with disability.

Table 2: Number of Persons with Disability by Sex and Type of locality-2022

BACKGROUND CHARACTERISTICS		WITHOUT DISABILITY		WITH DISABILITY		TOTAL
		NUMBER	PERCENT	NUMBER	PERCENT	
SEX						
	Male	988,141	97.7	23,096	2.3	**1,011,237**
	Female	1,042,892	97.0	32,251	3.0	**1,075,143**
PLACE OF RESIDENCE						
	Town	442,979	98.8	5,377	1.2	**448,356**
	Urban Village	1,087,776	97.9	23,507	2.1	**1,111,283**
	Rural	761,088	96.6	26,463	3.4	**787,551**
AGE GROUP						
	5-9	247,721	99.0	2,432	1.0	**250,153**
	10-14	228,301	99.0	2,412	1.0	**230,713**
	15-19	196,066	98.9	2,182	1.1	**198,248**
	20-24	190,833	98.9	2,064	1.1	**192,897**
	25-29	196,184	98.9	2,167	1.1	**198,351**
	30-34	188,823	98.8	2,219	1.2	**191,042**
	35-39	188,685	98.6	2,600	1.4	**191,285**
	40-44	155,807	98.3	2,737	1.7	**158,544**
	45-49	120,850	97.6	2,986	2.4	**123,836**
	50-54	86,912	96.7	3,008	3.3	**89,920**
	55-59	69,482	95.5	3,236	4.5	**72,718**
	60-64	54,941	93.7	3,678	6.3	**58,619**
	65-69	41,742	91.1	4,096	8.9	**45,838**
	70-74	26,516	86.5	4,146	13.5	**30,662**
	75-79	16,151	80.5	3,917	19.5	**20,068**
	80-84	11,054	72.8	4,130	27.2	**15,184**
	85+	10,965	59.9	7,337	40.1	**18,302**
	NATIONAL	**2,031,033**	**97.3**	**55,347**	**2.7**	**2,086,380**

Type of disability

Type of Disability by Level of Difficulty

The Washington Group Short Set questions on function tool collect information on six types of difficulties thus seeing, hearing, communicating, walking, remembering and self-care for people aged 5 years and above. Each question has four responses namely No difficulties, some difficulties, A lot of difficulty and cannot do it all.

Of the 2.7 percent prevalence reported nationally, 1.2 percent, which is the highest was reported under the sight disability. These are people with a lot of difficulty or cannot see at all. This is followed by persons with disability affected by difficulty in walking (0.9%) and those affected by difficult in Remembering (0.8%). The lowest prevalence rate was for people who had difficulty in communication at 0.3 percent. The result show that those without disabilities in five domains accounted for more than 99.0 percent except for the sight domain accounting for 98.8 percent.

Table 3: Type of disability by level of difficulty-2022

LEVEL OF DISABILITY	SEEING	HEARING	COMMUNICATING	WALKING	REMEMBERING	SELFCARE
A lot of Difficult	1	0.5	0.2	0.7	0.7	0.3
Cannot do it all	0.2	0.1	0.1	0.2	0.1	0.2
With Disability	1.2	0.6	0.3	0.9	0.8	0.5
No Difficult	90.9	96.8	99	96.6	96.4	98.5
Some Difficult	7.9	2.6	0.7	2.5	2.8	1.0
Without Disability	98.8	99.4	99.7	99.1	99.2	99.5
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Figure 4 displays the percentage distribution of types of disability. Out of the 85,085 reported cases of disabilities, the highest percentage, 27.5 percent, was attributed to individuals experiencing a lot of difficulty in seeing or were completely blind. The second-highest percentage (21.6%) was the category of individuals who difficulty in walking or could not walk at all. Individuals who had difficulty in remembering accounted for 18.6 percent of all the cases of disability, while hearing disability was reported by 12.6 percent of the cases. The chart further shows that 11.9 percent of the total cases of disability a difficulty with self-care. The type of disability related to communication had the lowest percentage, 7.8 percent of the total reported cases.

FIGURE 3: Population Distribution by type of disability-2022

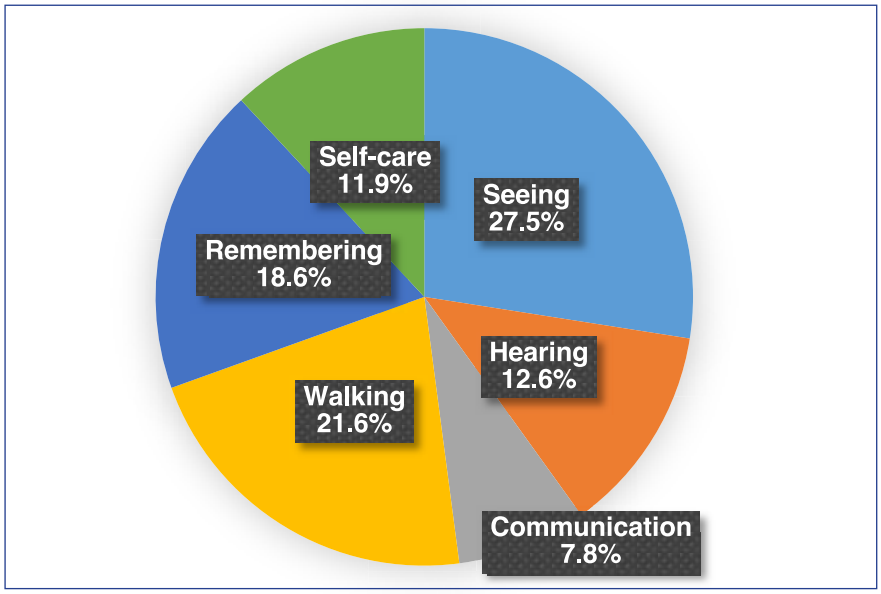


Table 4 further breaks down the types of disability by different age groups and population sub-groups. A comparison between population sub-groups show that the difficulty of seeing is most common in the elderly subgroup, thus people aged 65 years and This is common for almost all the types of disability except for disability of remembering which is common among the youth.

Type of Disability by Age

The table below displays the type of disability by age group and different sub-groups of the population. Amongst children aged 5-14 years the most common disability, around 24 percent is the difficulty to take care of on-self. This is expected because this is an age-group of children who are not full-grown toe able to take of themselves. Among the youth group, the highest disability reported is difficulty with remembering, affecting 22.3% of the persons in this group. This is slightly ahead of difficulty with seeing, which impacts 21.8% of the group.

The difficulty in seeing with is the most common disability in overall, accounts for the highest percentage of 31, of the PWD's in the adult sub-group, followed by difficulty in walking. The elderly also experience the same pattern as the adults. In general, there is a reductions in muscle strength is closely associated with an increase in age.

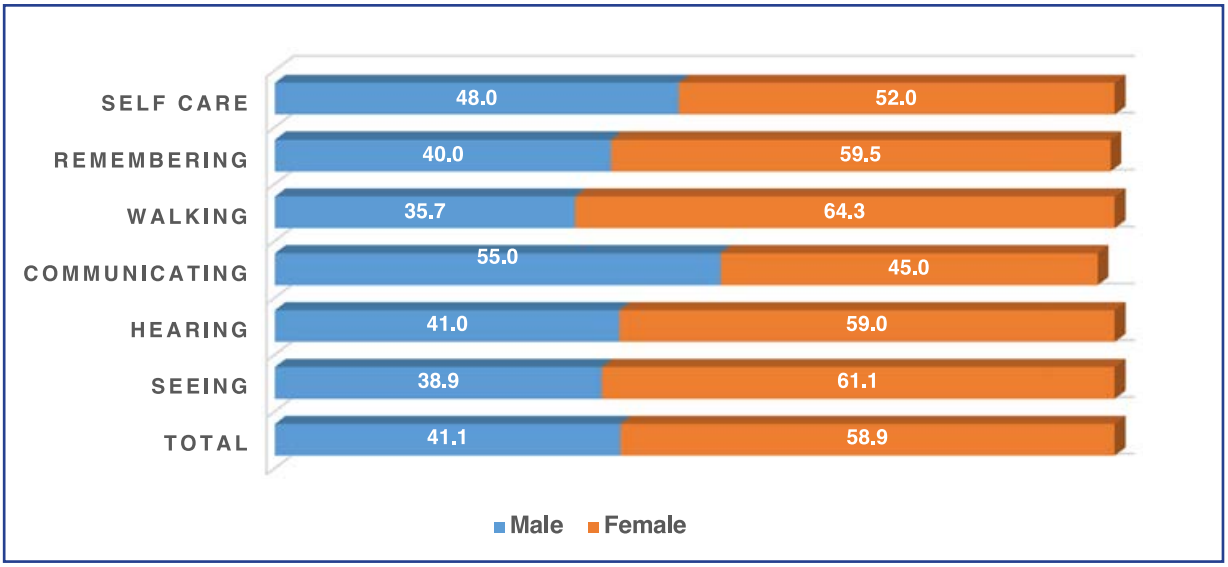
Table 4: Type of disability by age and population sub-groups-2022

AGE GROUP	TYPE OF DISABILITY												TOTAL
	SEEING		HEARING		COMMUNICATING		WALKING		REMEMBERING		SELF-CARE		
	NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%	
5-9	447	11.0	366	9.0	853	21.1	510	12.6	673	16.6	1,199	29.6	**4,048**
10-14	645	16.2	494	12.4	765	19.2	512	12.9	814	20.4	752	18.9	**3,982**
Children	**1,092**	**13.6**	**860**	**10.7**	**1,618**	**20.1**	**1,022**	**12.7**	**1,487**	**18.5**	**1,951**	**24.3**	**8,030**
15-19	718	20.7	384	11.1	661	19.0	415	11.9	725	20.9	570	16.4	**3,473**
20-24	651	20.7	411	13.1	612	19.4	334	10.6	653	20.7	488	15.5	**3,149**
25-29	657	20.8	374	11.8	555	17.5	412	13.0	707	22.3	459	14.5	**3,164**
30-34	703	22.2	342	10.8	457	14.5	406	12.8	763	24.1	490	15.5	**3,161**
35-39	859	24.5	412	11.8	427	12.2	522	14.9	815	23.3	468	13.4	**3,503**
Youth	**3,588**	**21.8**	**1,923**	**11.7**	**2,712**	**16.5**	**2,089**	**12.7**	**3,663**	**22.3**	**2,475**	**15.0**	**16,450**
40-45	955	26.6	445	12.4	359	10.0	589	16.4	845	23.5	401	11.2	**3,594**
45-49	1,222	32.0	436	11.4	288	7.5	721	18.9	815	21.3	338	8.8	**3,820**
50-54	1,296	33.6	456	11.8	232	6.0	816	21.1	754	19.5	308	8.0	**3,862**
55-59	1,278	30.5	472	11.3	198	4.7	1,068	25.5	876	20.9	302	7.2	**4,194**
60-64	1,534	31.8	455	9.4	146	3.0	1,318	27.3	1,031	21.3	346	7.2	**4,830**
Adults	**6,285**	**31.0**	**2,264**	**11.2**	**1,223**	**6.0**	**4,512**	**22.2**	**4,321**	**21.3**	**1,695**	**8.3**	**20,300**
65-69	1,767	31.8	619	11.1	178	3.2	1,533	27.6	1,061	19.1	397	7.1	**5,555**
70-74	1,989	33.3	696	11.7	156	2.6	1,653	27.7	1,019	17.1	461	7.7	**5,974**
75-79	2,024	32.8	828	13.4	139	2.3	1,680	27.2	969	15.7	537	8.7	**6,177**
80-84	2,301	32.8	975	13.9	174	2.5	1,885	26.9	1,026	14.6	645	9.2	**7,006**
85-89	1,765	29.6	928	15.6	161	2.7	1,589	26.7	823	13.8	690	11.6	**5,956**
90-94	1,488	27.7	909	16.9	167	3.1	1,364	25.4	773	14.4	666	12.4	**5,367**
95-99	725	25.7	477	16.9	107	3.8	691	24.5	422	15.0	400	14.2	**2,822**
100+	355	24.6	235	16.3	41	2.8	348	24.1	230	16.0	233	16.2	**1,442**
Elderly	12,414	30.8	5,667	14.1	1,123	2.8	10,743	26.7	6,323	15.7	4,029	10.0	**40,299**
TOTAL	**23,379**	**27.5**	**10,716**	**12.6**	**6,677**	**7.8**	**18,366**	**21.6**	**15,795**	**18.6**	**10,152**	**11.9**	**85,085**

Type of Disability by Sex

The prevalence of disability is higher in female compared to males at 58.9 and 41.1percent respectively. Further **Figure 5** below shows the prevalence on most of types of disability, females are the most affected except in the difficulties in communicating at 45.0 percent while male prevalence is at 55.0 percent. The lowest male prevalence is recorded in difficulty in Walking at 35.7perent while female prevalence in difficulty in walking is at 64.3 percent

FIGURE 4: Type of disability by sex



Disability by Marital Status

Culturally, marriage was regarded as one of the important events of one's life. It was an institution that gave a sense of attachment, belonging and also integrity to individuals. This goes for everyone who attains marrying age including those with disabilities. **Table 5** shows that more men (26.5%) with disability, compared to their counterparts (16.5%) reported to be married, the same goes for the females though the difference is not very significant. Of all women with disability 18.6 percent reported to be widowed, showing a significant difference to their counterparts who accounted for 3.3 percent.

Table 5: Percentage Distribution Of Disability Status By Marital Status A-2022

	WITHOUT DISABILITY		WITH DISABILITY	
MARITAL STATUS	MALE	FEMALE	MALE	FEMALE
Married	16.5	16.2	26.5	17.0
Never married	72.3	69.5	59.1	56.0
Living Together	9.5	9.5	7.9	5.8
Separated	0.1	0.2	0.3	0.4
Divorced	0.7	1.2	1.5	1.9
Widowed	0.7	3.3	4.3	18.6
Divorced but now living together	0.1	0.1	0.2	0.1
Widowed but now living together	0.1	0.1	0.2	0.2
TOTAL PERCENT	100.0	100.0	100.0	100.0

Registration of people with disabilities

Birth Registration

Birth registration is compulsory in Botswana, to access service such as health or education service among others one has to produce birth certificate. Information on birth registration was collected for children with disability aged 5 year to 15 years old .Nationally, 96.1 percent of children with disability registered or have birth certificates. **Table 6** below shows a lower record in those aged 14 years at 94.4 percent followed those aged 10 and those aged 12 both at 95.7 percent. The highest birth registration, 96.9, is observed at the six year olds; this does not come as a surprise because most of them enroll for primary school at that age and birth certificate is compulsory for registration. This followed by those aged eight, and those aged 13 years. There is no concrete explanation for high registrations at 8 years, but those aged 13 are children sitting for their Primary School Leaving Examinations, for which birth certificate is mandatory.

FIGURE 5: Percentage Distribution of Population aged5-15 years by Birth Registration-2022

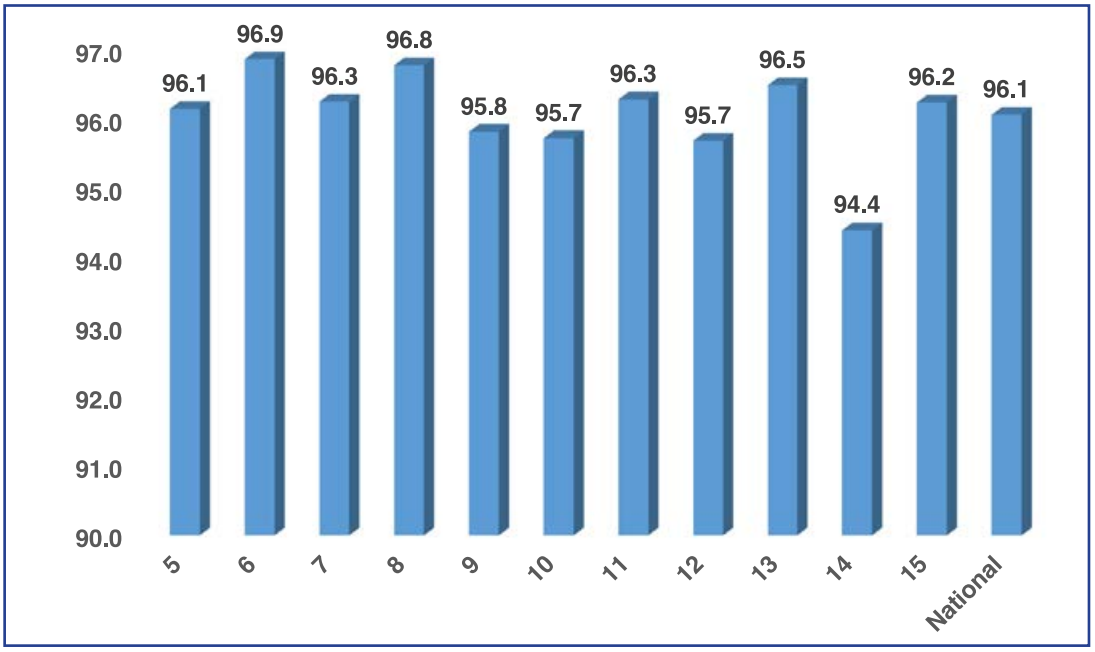


Table 6: Percentage distribution of disability status by age and birth registration status-2022

AGE	WITHOUT DISABILITY				TOTAL	WITH DISABILITY				TOTAL
	YES	NO	DON'T KNOW	NOT STATED		YES	NO	DON'T KNOW	NOT STATED	
5	9.7	10.1	10.1	12.7	**9.7**	9.3	9.5	4.8	17.6	**9.3**
6	9.6	8.8	9.4	10.9	**9.6**	9.0	7.4	4.8	11.8	**9.0**
7	9.6	8.5	9.8	10.5	**9.6**	9.0	9.0	4.8	11.8	**9.0**
8	9.5	8.3	10.4	9.6	**9.5**	9.4	6.3	19.0	0.0	**9.3**
9	9.7	9.1	11.0	9.5	**9.7**	8.9	7.9	23.8	0.0	**8.9**
10	9.6	9.8	10.8	8.8	**9.6**	9.2	10.6	4.8	17.6	**9.2**
11	9.8	12.0	9.8	9.1	**9.9**	9.6	9.0	9.5	5.9	**9.6**
12	9.2	10.1	9.5	8.6	**9.2**	9.5	10.1	14.3	5.9	**9.6**
13	8.1	8.3	6.3	6.9	**8.1**	8.0	7.4	4.8	11.8	**8.0**
14	7.5	7.1	6.3	6.4	**7.5**	8.5	12.7	9.5	11.8	**8.7**
15	7.6	7.9	6.6	7.0	**7.6**	9.5	10.1	0.0	5.9	**9.5**
TOTAL	**487,440**	**14,545**	**1,639**	**12,165**	**515,789**	**5123**	**189**	**21**	**17**	**5,350**

National Identity (Omang) Registration

All Botswana citizen aged 16 years and above are mandated to register for National Identity card which is used to access services such as health care. The national registration begins at age 16 therefore not all would have registered

In total 97.2 percent of persons with disability have register National identity (omang). **Table 7** below indicates that national identity registration is nearly evenly distributed across all age group except for the 16-19 years age group.

Table 7: Percentage distribution of PWD's by age and omang registration status-2022

AGE GROUP	NATIONAL ID (OMANG) REGISTRATION			
	YES	NO	DON'T KNOW	NOT STATED
16-19	85.35	12.83	0.3	1.52
20-24	96.09	2.33	0.15	1.44
25-29	96.36	2.31	0.05	1.27
30-34	96.39	1.94	0.14	1.53
35-39	97.74	1.39	-	0.87
40-44	97.94	1.35	0.04	0.67
45-49	97.9	1.24	0.1	0.76
50-54	98.51	0.98	0.03	0.48
55-59	98.18	1.35	0.03	0.44
60-64	98.29	1.27	-	0.44
65-69	97.66	1.85	0.05	0.44
70-74	97.86	1.61	0.12	0.41
75-79	97.75	1.73	0.03	0.49
80-84	97.72	1.79	0.05	0.44
85+	97.22	2.19	-	0.59
NATIONAL	**97.2**	**2.06**	**0.06**	**0.68**

Table 8: Percentage distribution of disability status by age and National Identity (omang) registration status-2022

AGE GROUP	WITHOUT DISABILITY					WITH DISABILITY				
	YES	NO	DON'T KNOW	NOT STATED	TOTAL	YES	NO	DON'T KNOW	NOT STATED	TOTAL
15-19	9.8	46.2	28.7	10.1	**10.6**	2.9	20.8	17.9	7.5	**3.3**
20-24	12.5	9.7	11.7	15.3	**12.6**	4.1	4.6	10.7	8.7	**4.1**
25-29	12.9	7.3	11.9	16	**12.9**	4.3	4.8	3.6	8.1	**4.3**
30-34	12.4	6.3	12.6	14.7	**12.4**	4.4	4.1	10.7	9.9	**4.4**
35-39	12.4	5.9	12.2	12.6	**12.2**	5.2	3.5	0.0	6.6	**5.1**
40-44	10.3	5.0	6.5	9.2	**10.1**	5.5	3.6	3.6	5.4	**5.4**
45-49	8.0	4.1	5.4	6.5	**7.8**	6.0	3.6	10.7	6.6	**5.9**
50-54	5.8	3.4	4.3	4.4	**5.7**	6.1	2.9	3.6	4.2	**6.0**
55-59	4.7	3.0	2.6	3.3	**4.6**	6.5	4.2	3.6	4.2	**6.5**
60-64	3.8	2.7	1.1	2.3	**3.7**	7.5	4.5	0.0	4.8	**7.4**
65-69	2.9	2.2	1.0	1.8	**2.8**	8.3	7.4	7.1	5.4	**8.2**
70-74	1.9	1.6	1.1	1.2	**1.8**	8.4	6.5	17.9	5.1	**8.4**
75-79	1.1	1.0	0.4	0.8	**1.1**	7.9	6.6	3.6	5.7	**7.9**
80-84	0.8	0.7	0.2	0.5	**0.8**	8.3	7.2	7.1	5.4	**8.3**
85+	0.7	0.9	0.4	1.3	**0.8**	14.8	15.7	0.0	12.8	**14.8**

Disabilities by Education

Disability status by school Attendance

The sustainable development agenda is comprehensive and inclusive, ensuring that PWDs are integrated into the planning, implementation, and monitoring processes to achieve equitable outcomes for all. Goal number 4 urges governments to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all, and this includes persons with disabilities. **Table 9** shows that 7.5 percent of PWDs are still at school and 35 percent have completed school. Almost half 44.6 percent have never attended school and 12.2 percent have discontinued school. This make up more than half of the people with disabilities.

Table 9: Type of difficulty by school attendance-2022

Type Of Difficult	Sex	Still at school	Completed school	Discontinued	Never attended	Not Stated	Total	Percent
Seeing	Male	777	3,402	968	3,951	-	**9,098**	38.9
	Female	794	6,322	1,750	5,415	-	**14,281**	61.1
	Total	**1,571**	**9,724**	**2,718**	**9,366**	**-**	**23,379**	**100.0**
Hearing	Male	472	1,454	457	2,014	-	**4,397**	41.0
	Female	432	2,301	803	2,783	-	**6,319**	59.0
	Total	**904**	**3,755**	**1,260**	**4,797**	**-**	**10,716**	**100.0**
Communicating	Male	624	865	366	1,818	1	**3,674**	55.0
	Female	395	810	287	1,511	-	**3,003**	45.0
	Total	**1,019**	**1,675**	**653**	**3,329**	**1**	**6,677**	**100.0**
Walking	Male	286	2,305	720	3,238	-	**6,549**	35.7
	Female	257	4,502	1,658	5,399	1	**11,817**	64.3
	Total	**543**	**6,807**	**2,378**	**8,637**	**1**	**18,366**	**100.0**
Remembering	Male	704	2,112	861	2,721	-	**6,398**	40.5
	Female	445	3,569	1,402	3,981	-	**9,397**	59.5
	Total	**1,149**	**5,681**	**2,263**	**6,702**	**-**	**15,795**	**100.0**
Self-care	Male	730	1,251	546	2,346	-	**4,873**	48.0
	Female	499	1,458	545	2,777	-	**5,279**	52.0
	Total	**1,229**	**2,709**	**1,091**	**5,123**	**-**	**10,152**	**100.0**
	Percent	7.5	35.7	12.2	44.6	0	**100**	
	TOTAL	**6,415**	**30,351**	**10,363**	**37,954**	**2**	**85,085**	**100.0**

Target 4.5 clearly states; by 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations. The statistics on education is used to give an insight on progress on the inclusivity of people with disabilities. **Table 10** presents disaggregation of school attendance for people with disability and those without disability. Only 9 percent of PWDs are at school and the comparative figure for those without disability is 28.6 percent. For those who have completed school, the figures are 40.9 percent and 54.8 percent for PWDs and those without disabilities respectively. The figures for PWDs are higher than those for people without disabilities in the categories of those who discounted or never went to school, which is exactly 50 percent. The comparative figure for people without disability is 12.2 percent. This scenario is worse in rural areas compared to cities and urban villages. In cities and towns 16.9 percent of males without disability never attended school and for males without disabilities its only 1.8 percent that never attended. Females with disabilities residing in urban villages also have higher percentage for those who never attended compared to those without disabilities residing in the same location, standing at 30 percent and 4.6 percent respectively.

It is evident that PWDs residing in the rural areas are the most affected compared to other areas. Over 60 percent of them discontinued or never went to school for both males and females. Those without disability around 22 percent discontinued or never attended school. There could be a wide range of reasons for the differences in school attendance between the two groups. These results should motivate researchers to do for further research or an-depth analysis to find out the reasons, which can later inform policy and program makers to come up with targeted and relevant policies.

Table 10: Disability status by school Attendance by place residence and sex-2022

TYPE OF LOCALITY	SEX	WITHOUT DISABILITY					WITH DISABILITY				
		STILL AT SCHOOL	COMPLETED SCHOOL	DISCONTINUED	NEVER ATTENDED	NOT STATED	STILL AT SCHOOL	COMPLETED SCHOOL	DISCONTINUED	NEVER ATTENDED	NOT STATED
		PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
TOWN	MALE	28.3	63.1	2.3	1.8	4.5	19.8	56.2	7.1	16.9	0.0
	FEMALE	28.1	63.3	2.5	1.6	4.5	13.2	63.7	8.9	14.1	0.0
URBAN VILLAGE	MALE	30.6	56.1	4.1	5.1	4.1	13.5	43.2	10.0	33.3	0.0
	FEMALE	28.5	58.7	4.4	4.6	3.9	7.4	49.7	12.9	30.0	0.0
RURAL	MALE	27.1	44.6	11.2	12.3	4.8	9.1	28.9	14.0	48.1	0.0
	FEMALE	28.2	47.1	9.5	10.9	4.2	5.3	33.4	14.6	46.7	0.0
TOTAL		**28.6**	**54.8**	**5.8**	**6.4**	**4.3**	**9.0**	**40.9**	**12.6**	**37.4**	**0.0**

Disability by the highest level of education attained

Attainment of a higher level of education normally results in better employment outcomes that may also be coupled with higher income resulting in economic security and independence. While 50 percent of PWD's go to school or have completed school, only 10 percent of them went further and have undertaken further study as shown in **Figure 7**. Degree students accounted for only 4 percent while Certificate and Diploma students accounted for 3 percent each.

FIGURE 6: Percentage distribution of people living with disability by highest level of education-2022

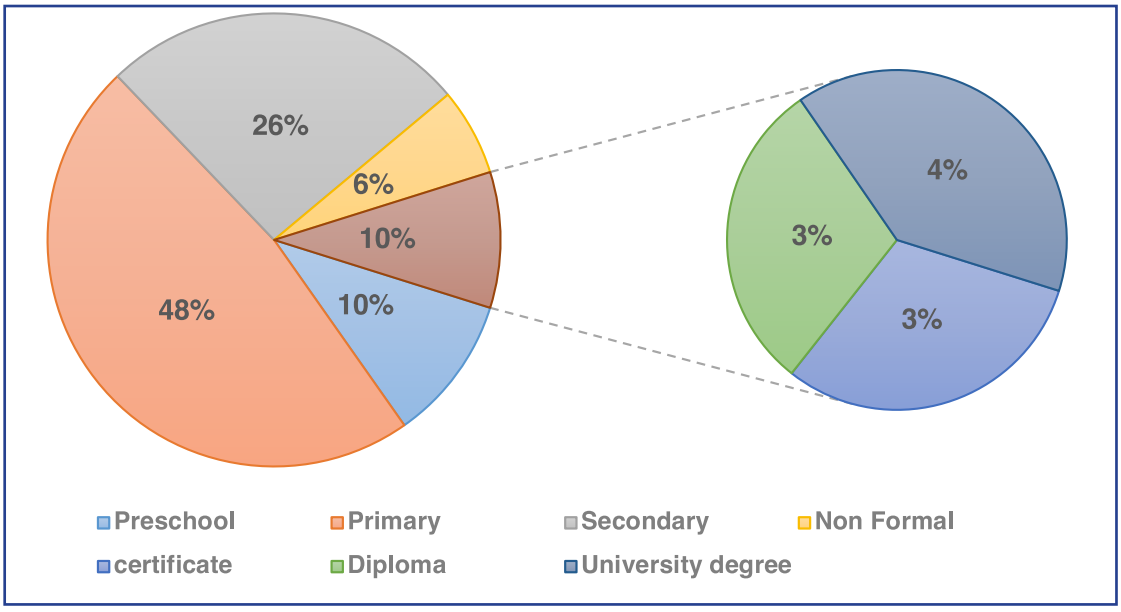


Table 11: Percentage distribution of disability status by highest level of education by place residence and sex-2022

EDUCATION ATTAINMENT	WITHOUT DISABILITY			WITH DISABILITY		
	TOWN	URBAN-VILLAGE	RURAL	TOWN	URBAN-VILLAGE	RURAL
Preschool	0.04	0.08	0.19	0.41	0.60	0.78
Primary	7.24	12.58	25.37	29.56	44.67	53.79
Secondary	52.79	60.85	60.25	41.40	35.72	32.42
Non Formal	0.35	0.69	1.55	2.33	4.47	5.97
Certificate	6.12	6.01	3.53	5.73	4.58	2.41
Diploma	11.22	8.99	4.94	7.2	5.13	2.83
Degree and above	22.23	10.8	4.15	13.26	4.75	1.72
Not stated	0.00	0.00	0.03	0.10	0.08	0.07
TOTAL (%)	**22.49**	**48.78**	**28.73**	**13.1**	**46.9**	**40.0**

Disability and Employment

Sustainable Development Goal number 8 promotes sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. The pledge of leaving no one behind is enshrined in all the goals. **Table 12** shows that in 2022, 28.9 percent of people were disability were doing some type of work for wage, salary or home use compared with 43.8 percent of those without disability. The same trend is observed through the age all the age groups where we have higher percentages for people without disabilities as compared to those with disability in regards to having done some type of work.

Table 12: Disability status by some type of work-2022

	DID SOME TYPE OF WORK							
	WITHOUT DISABILITY				WITH DISABILITY			
	YES	NO	NOT STATED	TOTAL	YES	NO	NOT STATED	TOTAL
15-19	5.5	91.2	3.3	**100.0**	3.4	96.4	0.2	**100.0**
20-24	28.6	66.1	5.3	**100.0**	18.8	81.0	0.2	**100.0**
25-29	45.9	48.8	5.2	**100.0**	30.3	69.6	0.1	**100.0**
30-34	52.2	42.8	5.0	**100.0**	30.6	69.4	-	**100.0**
35-39	57.4	38.3	4.3	**100.0**	36.0	63.9	0.1	**100.0**
40-45	59.8	36.3	3.8	**100.0**	36.5	63.5	-	**100.0**
45-49	61.0	35.4	3.6	**100.0**	38.2	61.7	0.1	**100.0**
50-54	58.5	38.0	3.5	**100.0**	36.8	63.2	-	**100.0**
55-59	51.5	45.1	3.4	**100.0**	31.3	68.7	0.0	**100.0**
60-64	34.7	62.3	3.0	**100.0**	21.3	78.7	-	**100.0**
TOTAL	**43.8**	**51.9**	**4.3**	100.0	**28.9**	**71.0**	**0.1**	100.0

Employment by type of work

The figure on the following page displays the distribution of PWD's who had done some type of work for pay or profit. This accounts for only 28.9 percent of PWD's aged 15-64 years. Out of the 28 percent around 68 percent were employees paid in cash, this compares to 76 percent of those without disability. For the category of those who are self-employed without employees, percentage of those with disability is slightly higher than those with disability.

FIGURE 7: Disability status by type of employment-2022

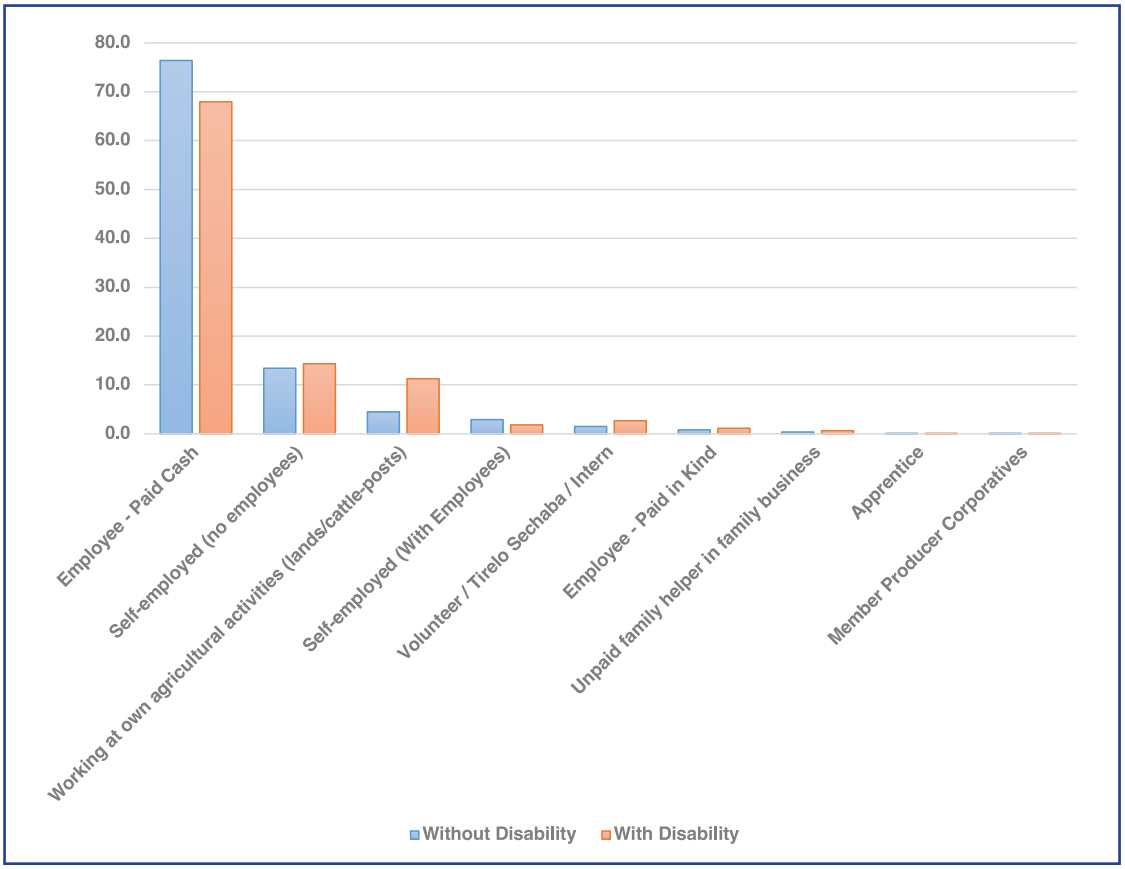


Table 13: Disability Status by age and type of employment-2022

	TYPE OF WORK	AGE GROUP										
		15-19	20-24	25-29	30-34	35-39	40-45	45-49	50-54	55-59	60-64	PERCENT
Without Disability	Employee - Paid Cash	1.7	9.2	14.9	16.1	17.3	14.6	11.4	7.8	5.1	1.9	76.4
	Employee - Paid in Kind	3.2	10.1	14.2	16.1	15.7	13.9	10.5	7.4	5.4	3.4	0.8
	Self-employed (no employees)	1.0	5.5	11.6	16.1	19.1	16.9	12.6	7.8	5.3	4.0	13.4
	Self-employed (With Employees)	0.3	2.1	7.3	13.9	18.2	18.2	15.3	10.9	8.4	5.3	2.9
	Member Producer Corporatives	2.8	8.5	9.8	12.6	13.8	14.6	10.6	11.8	8.1	7.3	0.0
	Apprentice	5.2	21.6	21.3	14.8	10.1	8.5	8.5	4.4	4.1	1.6	0.1
	Volunteer/ T.S / Intern	1.8	28.3	40.3	7.8	5.4	4.6	4.1	3.0	2.8	1.8	1.5
	Unpaid family helper	12.8	15.8	14.5	12.8	12.3	9.0	7.9	5.9	5.3	3.7	0.4
	Own agricultural activities	3.2	4.7	5.9	7.6	10.3	11.5	12.2	12.4	14.4	17.9	4.5
	Total	**10,698**	**54,571**	**90,082**	**98,458**	**108,240**	**93,222**	**73,705**	**50,815**	**35,781**	**19,036**	**100**
	Percent	**1.7**	**8.6**	**14.2**	**15.5**	**17.1**	**14.7**	**11.6**	**8.0**	**5.6**	**3.0**	

Table 14: Disability Status by age and type of employment-2022

	TYPE OF WORK	AGE GROUP										
		15-19	20-24	25-29	30-34	35-39	40-45	45-49	50-54	55-59	60-64	PERCENT
With Disability	Employee - Paid Cash	0.9	5.6	9.4	9.8	12.9	13.4	15.3	14.3	12.4	5.9	67.9
	Employee - Paid in Kind	0.0	3.4	8.0	13.6	13.6	12.5	18.2	13.6	10.2	6.8	1.1
	Self-employed (no employees)	1.3	2.7	5.1	7.6	13.3	14.9	14.5	15.0	12.7	13.0	14.3
	Self-employed (With Employees)	0.7	1.4	5.6	9.9	11.3	14.1	13.4	17.6	16.9	9.2	1.8
	Member Producer Corporatives	20.0	0.0	0.0	0.0	20.0	40.0	0.0	20.0	0.0	0.0	0.1
	Apprentice	0.0	12.5	12.5	25.0	0.0	0.0	0.0	25.0	25.0	0.0	0.1
	Volunteer/ T.S / Intern	1.0	19.2	29.8	7.7	4.3	4.3	6.7	7.7	7.2	12.0	2.7
	Unpaid family helper	8.0	6.0	4.0	8.0	16.0	14.0	10.0	16.0	10.0	8.0	0.6
	Own agricultural activities	0.8	1.4	2.5	3.3	7.1	8.3	13.1	14.0	17.8	31.6	11.3
	Total	**74**	**388**	**656**	**678**	**938**	**998**	**1,140**	**1,108**	**1,009**	**783**	**100.0**
	Percent	**1.0**	**5.0**	**8.4**	**8.7**	**12.1**	**12.8**	**14.7**	**14.3**	**13.0**	**10.1**	

Usage of Information and Communication Technology

The use of Information and communication Technology device by individual with disabilities empowers them to live independently as enables them to carry out their tasks and access information on their own. The availability and accessibility of Information and communication Technology allows Persons with disability to realize their full participation in all aspects of society and development in equal terms. Information will include the use of phones, computer and internet for the past three month prior to 2022 census data collection.

The results indicate that a significantly high proportion (62.7%) of persons with disability use Mobile phones, comparable to 77.4% of persons without disability who use mobile phones. This indicates that more than half of persons with disability have access to modern technologies which advocates for the realization and progress towards archiving SDG target of inclusivity for all and to leave no one behind. However, less than one third of both persons with disability and persons without disability use computer (10.2% and 32.3% respectively).A lower proportion of persons with disability use internet (24.4) compared to 58.7% people without disability.

Table 15: Disability status by device usage-2022

DEVICE USE	USAGE STATUS	WITHOUT DISABILITY	WITH DISABILITY	TOTAL POPULATION
Mobile phone				
	Yes	77.4	62.7	77.0
	No	22.6	37.3	23.0
	Total	**100.0**	**100.0**	**100.0**
Computer				
	Yes	32.3	10.2	0.3
	No	67.7	89.8	0.7
	Total	**100.0**	**100.0**	**1.0**
Internet				
	Yes	58.7	24.4	57.9
	No	41.3	75.6	42.1
	Total	**100.0**	**100.0**	**100.0**

POLICY IMPLICATIONS

A profile of people with disability is key in providing a platform for policy and program formulation and for government to design targeted interventions for different population subgroups. Subsequently, these statistics are crucial for monitoring progress in meeting the goal of leaving no one behind established under SDGs and furthermore provide an insight about the extent to which people with disabilities are; being included in society, benefit from government programmes, or are included in the workforce.

This analysis indicate a slight decrease in the national prevalence rate from 2.9 percent to 2.7 percent. This reduction implies that there could have some intervention by government that led to this decrease. Programs and interventions that could have led to this reduction must be identified and intensified.

Prevalence rate for females have increased while it decreased for males, between 2011 and 2022. Policy makers should reflect on the measures that could have specifically caused this reduction to have the same applied to the females with disabilities and close the disparity gap as highlighted by in Target 10.2 of the SDG's that states; by 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

Data on disability prevalence rates and types of disability by geographical location can help government with efficient resource allocation and mobilisation. Disability prevalence rate is high in rural areas, this can inform program to allocate more resources, to rural areas than urban. The resource allocation, both financial and human are usually minimal in these areas than cities and towns.

The extent to which the education system caters for people with disabilities is critical in affording equal access to education for all, including people with disabilities. These results indicate that half of the people with disabilities discontinue or never attend school. This 50 percent that do not have any educational attainment Government should come up programs that will absorb them. This consequently extends the employment sector.

CONCLUSIONS AND RECOMMENDATIONS

The 2022 Botswana Population and Housing Census adopted Washington Group Short Set on functioning the first time to collect information about people with disabilities. This paper presents the profile of people with disability and these conclusions were drawn from the results;

- Prevalence rate has slightly decreased from 2.9 to 2.7 between 2011 and 2022
- The number of Persons with disability were 55,347 of which 32,251 were females and 23,096 were males
- There were 85,085 cases of disability
- Disability prevalence is higher in females than males
- The most common disability is difficulty in seeing with 27.5 percent
- The results indicate that the disability prevalence increases with age, with elderly persons with representing 47.5percent cases of disability, youth comprising 38.5percent, adults at 23.9percent whereas children with disability were 9.5percent of the population with disability.
- Prevalence rate is higher in rural areas then urban areas.
- The majority of population with disabilities have acknowledged their existence through birth registration And 97.3percent of those eligible for national identity registration have registered,
- As Education is very important of persons with disabilities have accessed education and modern technology
- The most common current economic activity reported across all disabilities was cash paid employment followed by homework and working at own lands and cattle post

As all governments are expected to report on their progress with regards to the sustainable development indicators, it is imperative to ensure that the data that is collected will feed in the SDG's target progress. This also provides in insight with regards to age, sex, residence and other demographic factors of the people living with disabilities. These are factors that should be taken into consideration in planning programs for different groups of the population.

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Children with disabilities: Profiles and Characteristics

Khaufelo Raymond Lekobane and Thabile Anita Samboma

EXECUTIVE SUMMARY

About 240 million children globally have some form of disability. Most of these children live in Africa. The 2030 Agenda for Sustainable Development is disability-inclusive and pledges to leave no one behind. The Leave No One Behind principle of the 2030 Agenda recognises people with disabilities as a vulnerable group. The LNOB principle calls for data to be disaggregated by population subgroups, including children and people with disabilities. Children with disabilities are not a homogeneous population group. They include children who were born with a genetic condition that affects their physical, mental or social development; those who sustained a severe injury, nutritional deficiency or infection that contributed to long-term functional difficulties; or those exposed to environmental toxins that resulted in developmental delays. Other international treaties have recognised the issue of child disability, among others, the Convention on the Rights of the Child and the Convention on the Rights of Persons with Disabilities.

Botswana signed and ratified the United Nations Convention on the Rights of Persons with Disabilities in August 2021. Before signing and ratifying the CRPD, Botswana relied on several instruments for disability issues. These include the 1996 National Policy on Care for People with Disabilities. This policy stresses the importance of integration for people with disabilities and ensuring equal opportunities for all. In 2010, the National Disability Coordinating Office (NDCO)

Within the Office of the President in 2010 was established, with a mandate to coordinate the implementation of national policies, strategies and programmes aimed at the empowerment and well-being of people with disabilities. Notwithstanding this, the implementation of this policy has been slow and ineffective, especially in improving the lives of people with disabilities. In addition, the disability movement in Botswana is weak, hindering efforts to advocate for the rights of people with disabilities. Therefore, the main objective of this study is to profile children with disabilities in Botswana. The secondary objective is to profile children with disabilities by demographic characteristics (age and sex) and across districts to identify where they live.

We employed Sen's capability approach to conceptualise child disability. Disability was derived in accordance with the UN's Washington City Group on Disability Statistics definition. We used self-reported information on functional limitations from a set of questions used by Statistics Botswana, framed in line with the UN's Statistical Office recommendation for a shortlist list of questions to measure disability consistently worldwide. The disability variable used in this study has six categories explaining each type of functional limitation: difficulty in seeing, hearing, walking, remembering, communicating, and self-care (use of hands). A child is identified as living with a disability if he/she reports 'a lot of difficulty' or 'cannot do it at all' in at least one of the six domains.

Overall, the results reveal that the prevalence of child disability is 1.1 per cent, meaning a total of 6,193 children aged 5 to 17 years are considered living with disability. The results further show that most children living with disability suffer functional limitations of self-care (37.7%), communicating (33.2%) and remembering (31.5%). The prevalence of disability is higher for children aged 15-17 (1.2%), followed by those aged 10-14 (1.1%) and last, those aged 5-9 (1%). The prevalence of disability is higher for boys (1.2%) than girls (0.9%). The results show that the prevalence of child disability is higher in rural areas than in urban villages and cities/towns. The majority of children with disabilities are found in Kweneng East, recording more than 10 per cent. This is followed by Central Tutume (9%), Central Serowe/Palapye (8.5%) and Central Mahalapye (7.8%). The rest of the districts recorded less than 6 per cent. The results further reveal that the prevalence of child disability differs significantly across districts. These results have significant policy implications. Overall, profiling child disability by sex, age, and place of residence provides valuable insights for policymakers to develop more effective strategies for supporting children with disabilities and promoting inclusivity and equality in society.

INTRODUCTION

According to UNICEF (2021), about 240 million children globally have some form of disability. Most of these children live in Africa. West and Central Africa accounted for the highest prevalence of child disability (15%), followed by Eastern and Southern Africa (10%) (UNICEF, 2021). The 2030 Agenda for Sustainable Development is disability-inclusive and pledges to leave no one behind (UN, 2015)[2]. The Leave No One Behind (LNOB) principle of the 2030 Agenda recognises people with disabilities as a vulnerable group (UN, 2015). The LNOB principle calls for data to be disaggregated by population subgroups, including children and people with disabilities.

Children with disabilities are not a homogeneous population group. They include children who were born with a genetic condition that affects their physical, mental or social development; those who sustained a severe injury, nutritional deficiency or infection that contributed to long-term functional difficulties; or those exposed to environmental toxins that resulted in developmental delays (UNICEF, 2021). The Convention on the Rights of the Child (CRC) recognises the human rights of all children, including those with disabilities (UN, 1989). Along with the CRC, the Convention on the Rights of Persons with Disabilities (CRPD) provides a powerful new impetus to promote the human rights of all children with disabilities. According to the CRPD, children with disabilities "include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis" (UN, 2006).

After many years, Botswana signed and ratified the United Nations CRPD in August 2021 despite intense advocacy by Civil Society Organisations (CSOs) working on disability rights in Botswana and the SADC region. It is, therefore, hoped that by signing and ratifying the CRPD, Botswana will develop national legal frameworks on disability to ensure that disability rights instruments are applied effectively. Before signing and ratifying the CRPD, Botswana relied on several instruments for disability issues.

The 1996 National Policy on Care for People with Disabilities [NPCPD] recognises and protects every individual's disability rights and dignity. It stresses the importance of integration for people with disabilities and ensuring equal opportunities for all (Republic of Botswana, 1996). As a guideline, the policy recommends a multi-sectoral approach to implementing it, with responsibilities for the various sectors.

This led to the establishment of the National Disability Coordinating Office (NDCO) within the Office of the President in 2010, with a mandate to coordinate the implementation of national policies, strategies and programmes aimed at the empowerment and well-being of people with disabilities. Notwithstanding this, the implementation of the NPCPD has been slow (Pfumorodze & Fombad, 2011) and ineffective, especially in improving the lives of people with disabilities (Omotoye, 2018).

The Botswana Council for the Disabled (BCD), an umbrella organisation dealing with Persons with disabilities, is crucial. This organisation was set up with a mandate to coordinate the activities of all NGOs providing rehabilitation services to persons with disabilities, as well as promote organisations and associations for PWDs and monitor their activities. The BCD is recognised by the government of Botswana as the official

[2]The Agenda makes eleven explicit references to people with disabilities, and people with disabilities are also included wherever vulnerable is referenced (18 times).

representative body for the NGO disability movement and disability issues generally. Thus, due to its representative nature, this organisation plays an important role and is a critical voice in advocating for the rights of Persons with disabilities. Meanwhile, Pfumorodze and Fombad (2011) stated that the disability movement in Botswana is weak, hindering efforts to advocate for the rights of people with disabilities.

The country passed a new Disability Act in 2024. This reflects Botswana's commitment to upholding the United Nations Convention on the Rights of Persons with Disabilities in Botswana, a significant step towards ensuring the rights and inclusion of persons with disabilities in the country. The act also establishes a National Disability Council, which will oversee the implementation of the act and ensure that the rights of persons with disabilities are protected. This council will play a vital role in advocating for the rights of persons with disabilities and ensuring equal access to opportunities in all areas of life. Therefore, the main objective of this study is to profile children with disabilities in Botswana. The secondary objective is to profile children with disabilities by demographic characteristics (age and sex) and across districts to identify where they live.

1. LITERATURE REVIEW

1.1. Conceptual Literature

The literature includes different models of disability, including the charity model, medical model, social model, human rights model, and interaction model, which inform how disability is understood and acted upon[3]. The most commonly used interactional model is the model underlying the International Classification of Functioning, Disability and Health (ICF) (WHO & World Bank, 2011). The ICF is presented as representing a workable compromise between medical and social models as a result of its greater recognition of the impact of environmental and structural factors on disability (WHO & World Bank, 2011; Groce et al., 2011; Al Ju'beh, 2015; Woodburn, 2013).

We employed Sen's capability approach to conceptualise child disability (Mitra, 2006; WHO & World Bank, 2011). The capability approach to disability is another interactional model. It allows researchers to analyse disability at the capability level (disability occurs when an individual is deprived of practical opportunities as a result of an impairment) and disability at the functioning level (an individual is disabled if they cannot do or be the things they value doing or being) (Mitra, 2006). In this framework, disability can be understood as a deprivation in terms of capabilities or functionings that results from the interaction of an individual's personal characteristics (e.g., impairment, age, race, gender), the individual's resources (assets, income); and the individual's environment (physical, social, economic, political) (Mitra, 2006; Trani & Loeb, 2010). The capability approach has often been compared to the ICF model (Mitra, 2014). It stresses the individual's freedoms and the possibility that economic resources, or the lack thereof, can be disabling (Mitra, 2006). Defining disability is complicated as it is 'complex, dynamic, multidimensional and contested' (WHO & World Bank, 2011). According to the UN Convention on the Rights of Persons with Disabilities (UNCRPD), 'Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others' (UNCRPD, 2006: 4). This fluid definition accommodates different understandings of disability or impairment (Schulze, 2010). UNCRPD's definition enshrines the social model of disability (Schulze, 2010).

1.2. Empirical Literature

Globally, the number of children born with disability increases daily. Statistics revealed that almost 240 million children worldwide, or one in 10, live with disabilities and experience deprivation in indicators such as health, education and protection (UNICEF, 2021).

According to UN (2021), children with disabilities are 24% less likely to receive early stimulation and responsive care and have 42% fewer chances of achieving foundational reading and numeracy skills. The probability of never attending school is 49% higher for them. In health terms, they have a 25% greater

[3]For a detailed discussion of these models, see Al Ju'beh (2015).

chance of suffering from wasting and a 34% greater chance of stunted development. They are also 53% more likely to have symptoms of acute respiratory infection. Nixon and Kuper (2018) stated that young children with disabilities are significantly more likely to be stunted, wasted and underweight than children without disabilities. In sex-disaggregated analyses, both boys and girls are also significantly more likely to be malnourished than boys and girls without disabilities, respectively. This adds to the body of evidence that has shown higher prevalence and adverse impacts of nutritional disorders in young children with disabilities compared with those without disabilities. Evidence from Malawi has also shown that children with disabilities were more likely to have adverse outcomes from severe acute malnutrition than children without disabilities.

Southern Africa faces enrolment challenges, but there is also epistemological exclusion because of inaccessible curriculum and inequality in the distribution of resources within higher education institutions. Moreover, Chakaita (2010) in Zimbabwe, Mutanga (2015) in South Africa, and Subbie (2014) in Uganda have observed a persistent lack of training in disability issues for personnel working with students.

It has been found that in Botswana, women and girls with disabilities tend to suffer more during pandemics such as COVID-19. Women and girls with disabilities are often pushed to the extreme margins and experience profound discrimination. In Botswana, during the onset of COVID-19, access to education and healthcare services was a challenge. "When schools were re-opened after lockdown, the government announced that children with disability will only join in a few weeks after their peers; this exacerbated the already existing discrimination," said a child with disability. As a result of this segregation, there was stigma and assumptions that it meant children with disability had COVID-19, and this affected their daily interaction with peers. They lost contact time with their teachers (UNICEF, 2022).

In most parts of Botswana, there are misconceptions about children with disability. As such, it is reported that young parents often give up their child born with disability for adoption or to be raised by grandparents, in part due to misperceptions and the negative stigma associated with a child with a disability. Caregivers expressed concerns that their children would not be accepted into the community; however, they explained that they, as parents of children with disabilities, must display overwhelming compassion as a means to counteract the negativity (Republic of Botswana, 2019).

Empirical literature shows that children with disabilities are also more likely to experience multiple deprivations (multidimensional poverty) than children without disabilities (Trani & Cannings, 2013). In addition, empirical evidence shows that children with disabilities are amongst the most marginalised and discriminated against children in the world (Trani et al., 2013; Trani & Cannings, 2013) and are at higher risk of physical, sexual, and other forms of violence (UNICEF, 2013). A recent study by Lekobane and Samboma (2023) shows that children with disabilities have higher multidimensional poverty levels compared to those with no disability. The study concluded that children living with disabilities in Botswana have limited opportunities compared to those without disabilities.

2. METHODOLOGY

2.1 Measuring childhood disability

Disability was derived in accordance with the UN's Washington City Group on Disability Statistics (WGDS) definition (Madans, 2011). Self-reported information was used on functional limitations from a set of questions used by Statistics Botswana, framed in line with the UN's Statistical Office recommendation for a shortlist list of questions to measure disability consistently worldwide. A self-reported measure of disability has been extensively used and is considered to be valuable (Murray & Chen, 1992; Mont & Viet Cuong, 2011; Pagan, 2011; Mitra et al., 2013; Mutwali & Ross, 2019; Emerson & Llewellyn, 2022).

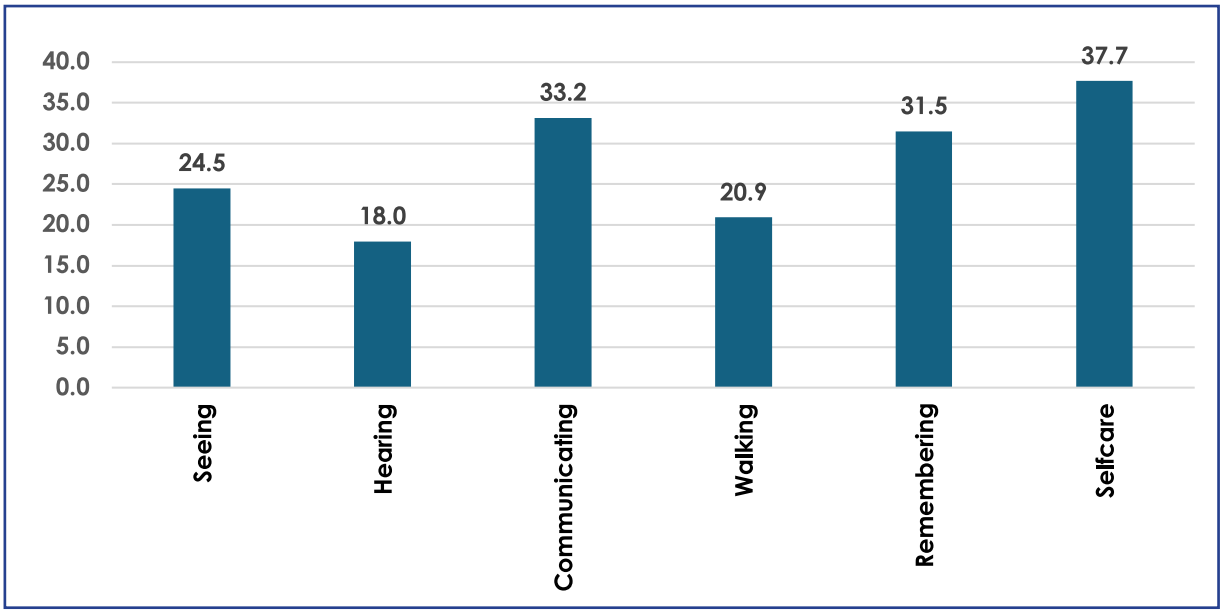
The shortlist includes six questions: five (5) capturing functional limitations (limitations in seeing, hearing, walking or climbing steps, concentrating, and communicating) and one (1) of self-care (Mitra, 2013). The disability variable used in this study has six categories explaining each type of functional limitation: difficulty in seeing, hearing, walking, remembering, communicating, and self-care (use of hands). All six domains

had four responses: [1] 'no difficulty', [2] 'some difficulty', [3] 'a lot of difficulty', [4] 'cannot do it at all'. The six domains were recoded into independent dummy variables to explain each specific functional limitation. Following WGDS, a child reporting 'some difficulty' or 'a lot of difficulty' in any of the six functional domains was defined as disabled in that category. The functional domains were then merged into a single domain to determine the disability status of a child. A child is identified as living with a disability if he/she reports difficulty in at least one of the six domains.

3. Findings and Discussions

This chapter presents disability status of children and associated functional limitations. Overall, the results reveal that the prevalence of child disability is 1.1 per cent, meaning a total of 6,193 children aged 5 to 17 years are considered living with disability. **Figure 1** depicts the proportion of children living with disability by functional limitation (disability type). Figure 1 shows that most children living with disability suffer functional limitations of self-care (37.7%), communicating (33.2%) and remembering (31.5%).

FIGURE 1 : Prevalence of disability by functional limitation (disability type) 2022



3.1. Children with disabilities by individual characteristics

3.1.1. Children with disabilities by age

The prevalence of disability is higher for children aged 15-17 (1.2%), followed by those aged 10-14 (1.1%) and last, those aged 5-9 (1%) **(Figure 2)**. Children aged 5-9 account for the largest percentage of children with disabilities, followed by those aged 10-14 **(Table 1).** Children aged 10-14 account for the largest percentage of children with disabilities suffering from functional limitations of hearing, seeing, walking and remembering. In contrast, children aged 5-9 account for the largest proportion of children with disabilities suffering from function limitations of self-care and communicating. The number of functional limitations suffered by children with disabilities differs across age groups **(Table 4).**

FIGURE 2: Prevalence of child disability by age

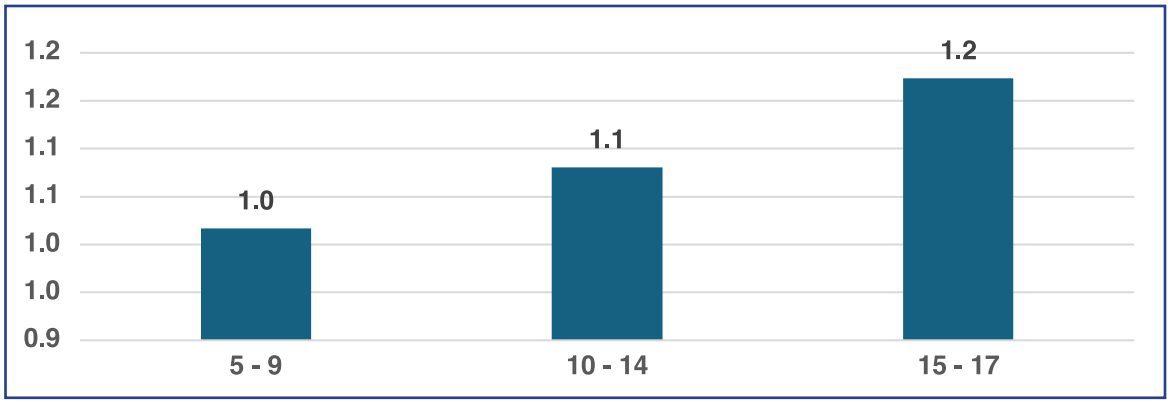


Table 1: Distribution of child functional limitations by age 2022

DISABILITY TYPE	5-9	10-14	15 – 17	TOTAL
SEEING	447	647	423	**1,517**
	(29.5)	**(42.6)**	**(27.9)**	**(100)**
HEARING	368	496	249	**1113**
	(33.1)	**(44.6)**	**(22.4)**	**(100)**
COMMUNICATING	855	766	433	**2,054**
	(41.6)	**(37.3)**	**(21.1)**	**(100)**
WALKING	511	515	270	**1,296**
	(39.4)	**(39.7)**	**(20.8)**	**(100)**
REMEMBERING	674	817	461	**1,952**
	(34.5)	**(41.9)**	**(23.6)**	**(100)**
SELF-CARE	1,203	752	378	**2,333**
	(51.6)	**(32.2)**	**(16.2)**	**(100)**
TOTAL	**2,432**	**2,412**	**1,349**	**6193**
	(39.3)	**(38.9)**	**(21.8)**	**(100)**

3.2 Children with disabilities by individual characteristics

3.2.1. Children with disabilities by age

The prevalence of disability is higher for children aged 15-17 (1.2%), followed by those aged 10-14 (1.1%) and last, those aged 5-9 (1%) **(Figure 2).** Children aged 5-9 account for the largest percentage of children with disabilities, followed by those aged 10-14 (Table 1). Children aged 10-14 account for the largest percentage of children with disabilities suffering from functional limitations of hearing, seeing, walking and remembering. In contrast, children aged 5-9 account for the largest proportion of children with disabilities suffering from function limitations of self-care and communicating. The number of functional limitations suffered by children with disabilities differs across age groups **(Table 2).**

FIGURE 3: Child disability prevalence by sex 2022

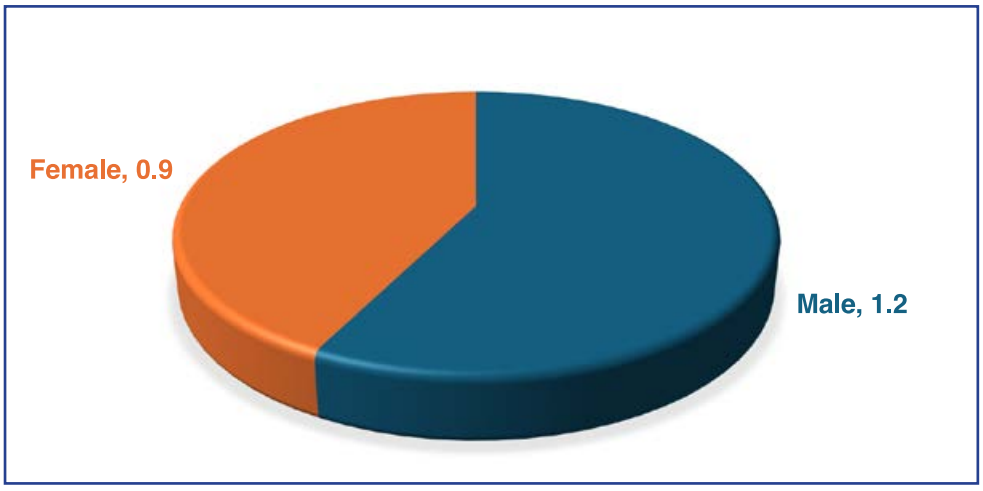


Table 2: Distribution of child functional limitations by sex 2022

DISABILITY TYPE	MALE	FEMALE	TOTAL
SEEING	821	696	1,517
	(54.1)	**(45.9)**	**(100)**
HEARING	622	491	1,113
	(55.9)	**(44.1)**	**(100)**
COMMUNICATING	1,256	798	2,054
	(61.1)	**(38.9)**	**(100)**
WALKING	719	577	1296
	(55.5)	**(44.5)**	**(100)**
REMEMBERING	1,206	746	1,952
	(61.8)	**(38.2)**	**(100)**
SELF-CARE	1381	952	2333
	(59.2)	**(40.8)**	**(100)**
TOTAL	3,582	2,611	6,193
	(57.8)	**(42.2)**	**(100)**

4.1. Children with disabilities and place of residence

4.1.1. Children with disabilities by type of residence

Place of residence is a very critical factor in analysing disability. Identifying where children with disabilities live is essential in informing policy planning and implementation, especially if the objective is to leave no one behind. **Figure 4** depicts that the prevalence of child disability is higher in rural areas than in urban villages and cities/towns. However, the majority of children with disabilities live in urban villages (44.3%) than in rural areas (42.6%) and cities/towns (13%) **(Table 3). Table 3** shows the type of functional limitation suffered by children with disabilities. The table shows that the type of disabilities suffered by children differ across the strata. For example, children with disabilities suffer from functional limitations of seeing, communicating and walking live in urban villages. In contrast, those suffering from functional limitations of hearing, remembering and self-care live in rural areas. Similarly, the number of functional limitations suffered by children with disabilities differs significantly across strata **(Table 3)**.

FIGURE 4: Prevalence of child disability by strata 2022

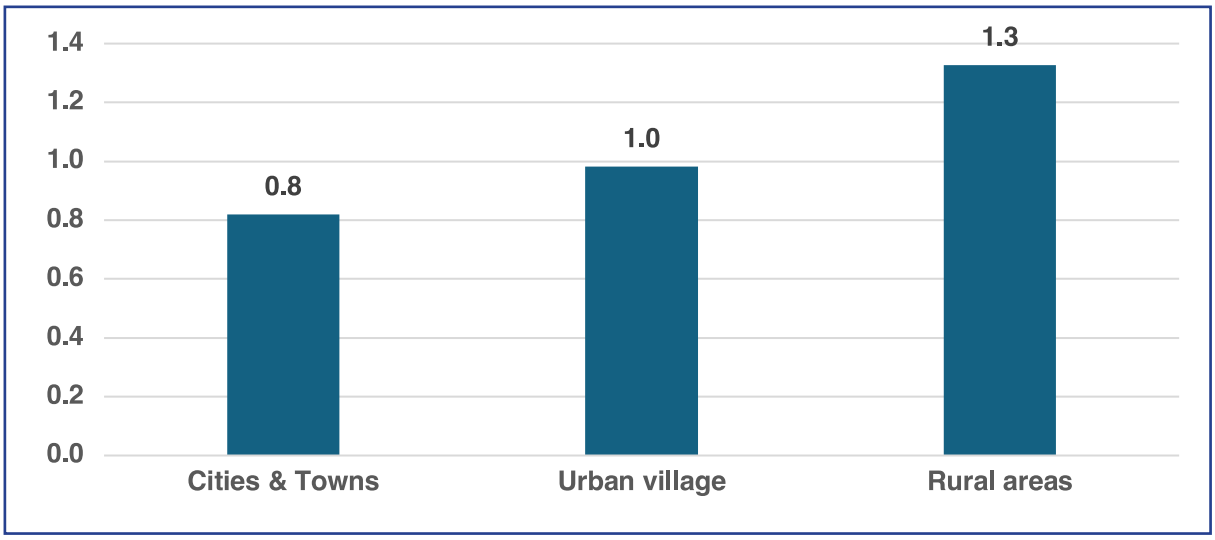


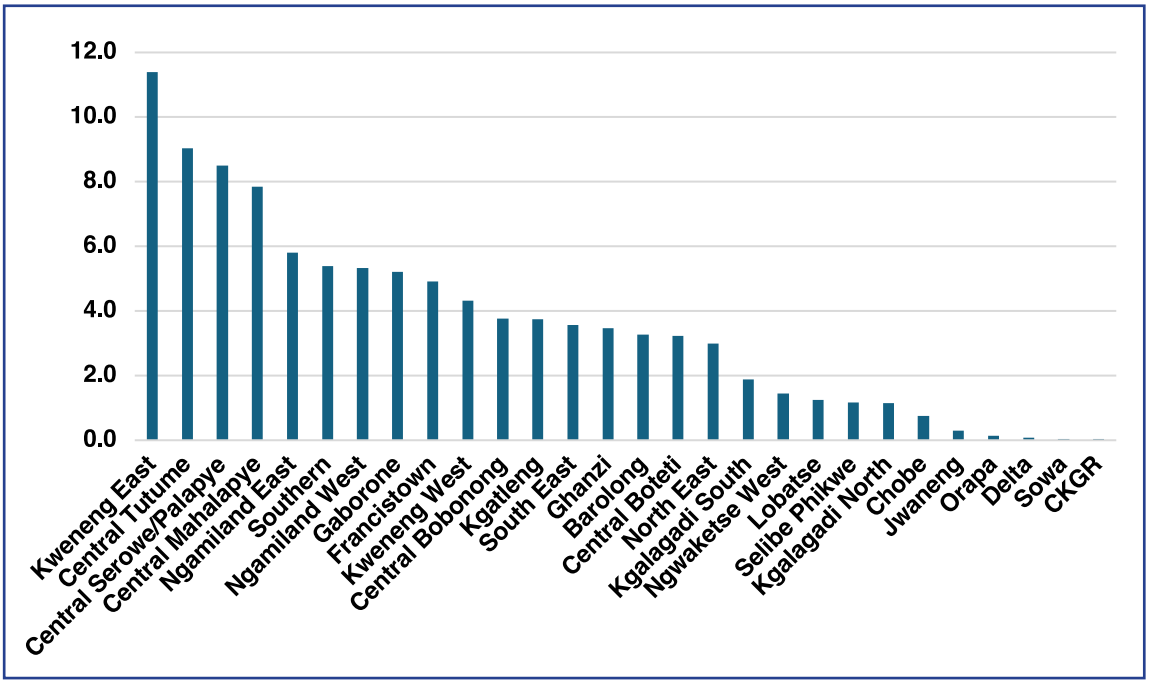
Table 3: Prevalence of child disability by strata 2022

	CITIES & TOWNS	URBAN VILLAGE	RURAL	TOTAL
SEEING	204	695	618	1517
	(13.4)	(45.8)	(40.7)	(100)
HEARING	150	444	519	1113
	(13.5)	(39.9)	(46.6)	(100)
COMMUNICATING	351	879	824	2054
	(17.1)	(42.8)	(40.1)	(100)
WALKING	154	587	555	1296
	(11.9)	(45.3)	(42.8)	(100)
REMEMBERING	259	827	866	1952
	(13.3)	(42.4)	(44.4)	(100)
SELF-CARE	264	1029	1040	2333
	(11.3)	(44.1)	(44.6)	(100)
TOTAL	806	2746	2641	6193
	(13.0)	(44.3)	(42.6)	(100)

4.1.2. Children with disabilities by districts

Figure 5 depicts the proportions of children with disabilities across districts. The figure shows that the majority of children with disabilities are found in Kweneng East, recording more than 10%. This is followed by Central Tutume (9%), Central Serowe/Palapye (8.5%) and Central Mahalapye (7.8%). The rest of the districts recorded less than 6%. The results further reveal that the prevalence of child disability differs significantly across districts (Table 7). Similarly, the number and type of functional disabilities suffered by children with disabilities differ significantly across districts **(see Table 8 and Table 9)**.

FIGURE 5: Proportions of children with disabilities by districts 2022



5. POLICY IMPLICATIONS

Profiling child disability by individual characteristics such as sex, age, and place of residence (locality type and districts) in Botswana has several policy implications:

1. Understanding the demographics of child disability can inform resource allocation. For example, the finding that most children with disabilities live in Kweneng East can help policymakers allocate resources effectively, such as healthcare facilities, special education programs, and assistive devices.

2. Profiling children with disability by gender and age helps in designing targeted interventions. For instance, we found that boys are disproportionately affected by functional limitations across all types of disabilities, which means that there is a need for interventions to address their specific needs. This may entail early screening programmes, specialised healthcare services, or educational support.

3. Profiling children with disabilities by all types of disabilities and the number of functional limitations across districts can facilitate healthcare planning by identifying areas with a higher prevalence of certain disabilities. For example, the finding that children with disabilities suffering from multiple functional limitations (3 or more) live in rural areas means that there is a need for the establishment of specialised healthcare facilities and the training of healthcare professionals to address the specific needs of disabled children in rural areas.

4. The disparities in disability prevalence among different boys and girls across different age groups and places of residence means that policy formulation and development should aim at reducing these disparities. For example, initiatives to improve access to healthcare and education for children with disabilities should be focused in rural areas.

5. The findings of this study can be used for advocacy purposes to raise awareness about the needs of children with disabilities. In addition, the results can empower advocacy groups to lobby for policy changes and increase funding for disability-related programmes and services.

6. Overall, profiling child disability by sex, age, and place of residence provides valuable insights for policymakers to develop more effective strategies for supporting children with disabilities and promoting inclusivity and equality in society.

6. CONCLUSIONS AND RECOMMENDATIONS

Children with disabilities are at the brunt of everything across all spheres, socially, politically and economically. This study has identified a high frequency of children with functional disability across all districts in Botswana. In addition, the study adds to the body of evidence that has shown a higher prevalence of disability in young children living in rural areas compared with those in urban areas.

A better understanding of how sex, age, and residence impact specific domains of functional impairment would allow researchers and policymakers to target some of the social and cultural factors that may underlie these difficulties. As such, there is a need to address these disparities urgently to reach the SDG targets. Concerted efforts to improve disability in all areas are urgently needed. Without a focus on disability, Botswana risks perpetuating inequities in basic needs, an unacceptable violation of the human rights of children with disabilities.

There is a need to strengthen the health sector to improve identification and service provision for children with functional disabilities. This calls for closing gaps by ensuring that systems are strengthening and quality improvement at all service levels: identifying children with disability by providing holistic support and policies to help them thrive. Specific interventions should include capacity strengthening for health workers and family members to address misperceptions and biases.

It is imperative to review guidelines and care protocols related to children with disability. There is a need to strengthen advocacy to raise awareness to support children with disabilities, especially in rural villages. This includes addressing a lack of support and high levels of stigma at the community level, advocating for inclusive and sufficient services at the health systems level, advocating for national-level policies, and inclusive global agendas and strategies. Advocacy is essential, along with strengthening systems and providing direct support to families and individuals, and it can happen simultaneously.

It is imperative to have evidence-based data to detect the magnitude of disabilities and their types among children. This will guarantee their inclusion in decision-making by ensuring they are counted, consulted, and considered in future health planning.

There is a need to strengthen inclusive participation so that the voices of children with disabilities can be heard in society; hence, ‘nothing about us, without us’. An accessible environment benefits a broad range of people.

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APPENDICES

Table 1: Number of functional limitations (disability type) across strata 2022

	CITIES & TOWNS	URBAN VILLAGE	RURAL AREAS	TOTAL
1	489	1,896	1,772	4,157
	(11.8)	**(45.6)**	**(42.6)**	**(100)**
2	166	366	359	891
	(18.6)	**(41.1)**	**(40.3)**	**(100)**
3	72	223	233	528
	(13.6)	**(42.2)**	**(44.1)**	**(100)**
4	56	180	188	424
	(13.2)	**(42.5)**	**(44.3)**	**(100)**
5	17	42	53	112
	(15.2)	**(37.5)**	**(47.3)**	**(100)**
6	6	39	36	81
	(7.4)	**(48.1)**	**(44.4)**	**(100)**
TOTAL	806	2,746	2,641	6,193
	(13.0)	**(44.3)**	**(42.6)**	**(100)**

Table 2: Number of child functional limitations by age 2022

NUMBER	5 - 9	10 - 14	15 - 17	TOTAL
1	1,639	1624	894	4,157
	(39.4)	**(39.1)**	**(21.5)**	**(100)**
2	339	339	213	891
	(38.0)	**(38.0)**	**(23.9)**	**(100)**
3	193	206	129	528
	(36.6)	**(39.0)**	**(24.4)**	**(100)**
4	176	173	75	424
	(41.5)	**(40.8)**	**(17.7)**	**(100)**
5	52	39	21	112
	(46.4)	**(34.8)**	**(18.8)**	**(100)**
6	33	31	17	81
	(40.7)	**(38.3)**	**(21.0)**	**(100)**
TOTAL	2432	2412	1349	6193
	(39.3)	**(38.9)**	**(21.8)**	**(100)**

Table 3: Functional limitations (disability type) across districts 2022

DISTRICTS	SEEING	HEARING	COMMUNICATING	WALKING	REMEMBERING	SELF-CARE
GABORONE	77	39	141	81	116	119
FRANCISTOWN	84	89	137	40	73	84
LOBATSE	23	9	24	16	25	28
SELIBE PHIKWE	15	8	37	12	33	22
ORAPA	1	1	6	0	3	3
JWANENG	4	3	5	3	8	6
SOWA	0	1	1	2	1	2
SOUTHERN	80	53	121	85	114	144
BAROLONG	53	37	60	42	69	75
NGWAKETSE WEST	22	15	27	20	30	29
SOUTH EAST	39	22	76	53	62	96
KWENENG EAST	197	104	225	144	198	260
KWENENG WEST	63	61	71	53	96	118
KGATLENG	38	31	94	58	83	97
CENTRAL SEROWE/PALAPYE	122	92	182	126	180	218
CENTRAL MAHALAPYE	140	94	122	81	133	190
CENTRAL BOBONONG	61	55	79	49	75	64
CENTRAL BOTETI	33	30	63	51	50	106
CENTRAL TUTUME	149	122	172	105	151	184
NORTH EAST	54	27	68	39	64	61
NGAMILAND EAST	86	61	103	80	111	131
NGAMILAND WEST	62	68	116	72	112	169
CHOBE	14	10	14	11	17	13
DELTA	1	0	2	2	1	2
GHANZI	57	43	64	38	78	50
CKGR	1	1	1	1	1	1
KGALAGADI SOUTH	26	24	23	24	42	34
KGALAGADI NORTH	15	13	20	8	26	27
TOTAL	**1,517**	**1,113**	**2,054**	**1,296**	**1,952**	**2,333**

Table 4: Number of functional limitations (disability type) across districts 2022

DISTRICTS	1	2	3	4	5	6
GABORONE	197	52	37	27	7	3
FRANCISTOWN	174	89	16	18	7	0
LOBATSE	55	8	5	7	1	1
SELIBE PHIKWE	42	12	13	4	0	1
ORAPA	5	3	1	0	0	0
JWANENG	16	1	0	0	1	1
SOWA	0	1	0	0	1	0
SOUTHERN	209	52	30	29	6	8
BAROLONG	145	16	20	14	5	3
NGWAKETSE WEST	60	16	9	2	2	1
SOUTH EAST	152	36	17	9	5	2
KWENENG EAST	501	76	56	59	7	6
KWENENG WEST	182	31	21	18	7	8
KGATLENG	146	39	22	17	5	3
CENTRAL SEROWE/PALAPYE	331	86	49	39	12	9
CENTRAL MAHALAPYE	344	59	46	30	2	5
CENTRAL BOBONONG	157	36	17	15	5	3
CENTRAL BOTETI	129	32	22	12	4	1
CENTRAL TUTUME	398	74	44	25	9	10
NORTH EAST	119	29	17	16	3	1
NGAMILAND EAST	256	39	28	28	6	2
NGAMILAND WEST	213	43	25	30	9	10
CHOBE	34	5	1	4	2	1
DELTA	4	0	0	1	0	0
GHANZI	153	30	16	12	3	1
CKGR	1	0	0	0	1	0
KGALAGADI SOUTH	82	18	9	7	0	0
KGALAGADI NORTH	52	8	7	1	2	1
TOTAL	**4,157**	**891**	**528**	**424**	**112**	**81**

Table 5: Distribution of children across districts by disability status and prevalence 2022

DISTRICTS	WITHOUT DISABILITY	WITH DISABILITY	PREVALENCE	PROPORTIONS	TOTAL
GABORONE	46,451	323	0	5	**46,774**
FRANCISTOWN	24,280	304	1	5	**24,584**
LOBATSE	7,264	77	1	1	**7,341**
SELIBE PHIKWE	12,172	72	0	1	**12,244**
ORAPA	2,496	9	0	0	**2,505**
JWANENG	4113	19	0	0	**4,132**
SOWA	732	2	0	0	**734**
SOUTHERN	35,888	334	0	5	**36,222**
BAROLONG	15,579	203	1	3	**15,782**
NGWAKETSE WEST	6,312	90	1	2	**6,402**
SOUTH EAST	21,744	221	1	4	**21,965**
KWENENG EAST	73,846	705	0	11	**74,551**
KWENENG WEST	14,654	267	2	4	**14,921**
KGATLENG	27,062	232	0	4	**27,294**
CENTRAL SEROWE/PALAPYE	52,170	526	1	9	**52,696**
CENTRAL MAHALAPYE	35,664	486	1	8	**36,150**
CENTRAL BOBONONG	20,777	233	1	4	**21010**
CENTRAL BOTETI	19,529	200	1	3	**19,729**
CENTRAL TUTUME	46,642	560	1	9	**47,202**
NORTH EAST	18,891	185	1	3	**19,076**
NGAMILAND EAST	30,759	359	1	6	**31,118**
NGAMILAND WEST	20,288	330	2	5	**20,618**
CHOBE	5,890	47	0	0	**5,937**
DELTA	214	5	2	0	**219**
GHANZI	12,843	215	2	4	**13,058**
CKGR	98	2	2	0	**100**
KGALAGADI SOUTH	9,246	116	1	2	**9,362**
KGALAGADI NORTH	5,587	71	1	1	**5,658**
TOTAL	**57,1191**	**6193**	**1**	**100**	**577,384**

NUPTIALITY

2022 POPULATION AND HOUSING CENSUS THE EVOLVING LANDSCAPE OF MARRIAGE: A CASE STUDY OF BOTSWANA

Dr Lucky Mokgatlhe & Grace Mphetolang

1.0 EXECUTIVE SUMMARY

This paper seeks to provide insights into marriage patterns and trends in Botswana and examine key factors contributing to this trends.

Since 1981, the institution of marriage has been on a drastic decline when 41% of respondents of eligible ages reporting being married, this has since dropped to 16% in 2022.While those reporting to be never married continues to rise, from 45% in 1981 to 68%, currently (2022).

On another note, the proportion of eligible population who reported to be either separated or divorced during the census periods continues to drop and there is vascillation in the population of those living under consensual union. Currently the percentage of people who have been in any consensual union/ marriage setup in Botswana is peaked at 28.4% that is, less than one-in-three people are in either in a marriage or co-habiting setup.

2.0 INTRODUCTION

Marriage, a cornerstone of many societies, has traditionally served as a social institution signifying commitment, procreation, and the formation of families. However, recent decades have witnessed a global decline in marriage rates, particularly in developed countries. Marriage, a deeply ingrained social institution, transcends a singular event. It represents a dynamic cycle encompassing various stages and transitions throughout a couple's journey. This paper explores the multifaceted phenomenon of declining marriage in the context of Botswana examining the key factors contributing to this trend and its potential consequences. Within Botswana's social fabric, marriage has historically held a position of primacy, serving as a symbolic rite of passage from childhood to adulthood. This significance is reflected in certain Batswana tribes where participation in matrimonial discussions is restricted to married individuals.

The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, encompass a comprehensive framework for achieving a more just and sustainable future. While seemingly distinct, the concept of marriage and family formation intersects with several SDGs in interesting ways. Goal 5: Gender Equality; SDG 5 promotes gender equality and the empowerment of all women and girls. This goal is intrinsically linked to marriage patterns. For instance, data on educational attainment gaps between married men and women can inform policies that promote equal opportunities in education and employment. Goal 3: Good Health and Well-being; SDG 3 focuses on ensuring healthy lives and promoting well-being for all at all ages. Marriage can be a source of social support and contribute to improved health outcomes. Conversely, unhealthy marital relationships can have detrimental effects on physical and mental health Indicators such as maternal mortality rates and the prevalence of

domestic violence within marriages can provide data on the potential health risks associated with certain marriage patterns. Goal 10: Reduced Inequalities; Marriage can be a factor in perpetuating economic inequalities. Analyzing indicators such as poverty rate among single-parent households compared to married couples with children can provide insights into the potential economic benefits or drawbacks associated with marriage. Goal 4: Quality Education; SDG 4 focuses on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. Analyzing indicators such as education level can indicate how education levels influence marriage patterns and family formation.

Nuptiality patterns in Botswana can be conceptualized through a binary marital status framework: never-married and ever-married. However, recent trends suggest a more nuanced understanding is necessary. The traditional progression from never-married to marriage may be interrupted by stages of cohabitation, or marital dissolution through separation, widowhood, or divorce. In essence, Botswana's social and economic landscape is evolving, leading to a reconsideration of traditional marital practices. Several socio-economic factors are hypothesized to be driving this trend. Firstly, increased educational attainment, particularly among women, fosters economic independence and delays marriage. Women with higher education levels are more likely to prioritize career advancement before settling down. Secondly, rising living costs create financial burdens, making marriage seem less attainable or desirable. Young adults may choose to cohabitate or remain single to manage expenses. Thirdly, economic uncertainty associated with precarious employment can make individuals hesitant to take on the responsibilities of marriage.

Beyond economic considerations, social norms surrounding marriage are also undergoing transformations. Individualism and the pursuit of personal fulfillment are increasingly valued, potentially leading to a decreased emphasis on traditional family structures. Furthermore, greater acceptance of cohabitation and alternative family forms provides individuals with options outside of marriage. Additionally, changing attitudes towards divorce and remarriage may make individuals less apprehensive about ending marriages that are perceived as unfulfilling.

2.1 Background

Botswana's Vision 2036, a national development plan, outlines a roadmap for achieving a prosperous and inclusive nation (Vision 2036; 2017). While not explicitly addressing marriage, understanding marriage trends is crucial for analyzing progress towards some of the Vision's key goals;Sustainable Economic Development: Vision 2036 emphasizes economic diversification and a skilled workforce. Stable married couples may contribute to a more stable workforce.Social Transformation: The Vision seeks a compassionate, just, and equitable society. The rise in cohabitation and alternative family structures raises questions about social support systems. Human Capital Development: Investing in education and healthcare is central to Vision 2036. The link between female education and delayed marriage can impact population growth and future workforce demographics. Sustainable Environment: Vision 2036 acknowledges the environment's role in national development. A decline in marriage rates and childbearing could contribute to a shrinking population.

The Government of Botswana's Transitional Development Plan (TDP) serves as a strategic blueprint for achieving national development goals in the lead-up to Vision 2036 (TDP; 2023) . TDP Pillars and Marriage: Economic Diversification and Job Creation: The TDP prioritizes diversifying Botswana's economy beyond diamonds and creating sustainable high-wage employment opportunities. The recent decline in marriage rates, particularly among women with higher education who may prioritize career advancement, could potentially impact the availability of skilled labor in the long term. Human Capital Development: Investing in human capital through education and healthcare is a cornerstone of the TDP. The observed link between rising female educational attainment and delayed marriage can impact population growth and future workforce demographics. Social Development and Poverty Reduction: The TDP aims to reduce poverty and promote social inclusion. The rise in cohabitation and alternative family structures raises questions about social safety nets and potential vulnerabilities faced by single parents or unmarried individuals. Sustainable Resource Management: The TDP acknowledges the importance of managing environmental resources for future generations.. The TDP can prioritize responsible resource management policies while considering the evolving demographics of Botswana.

2.2 Definition of Concepts

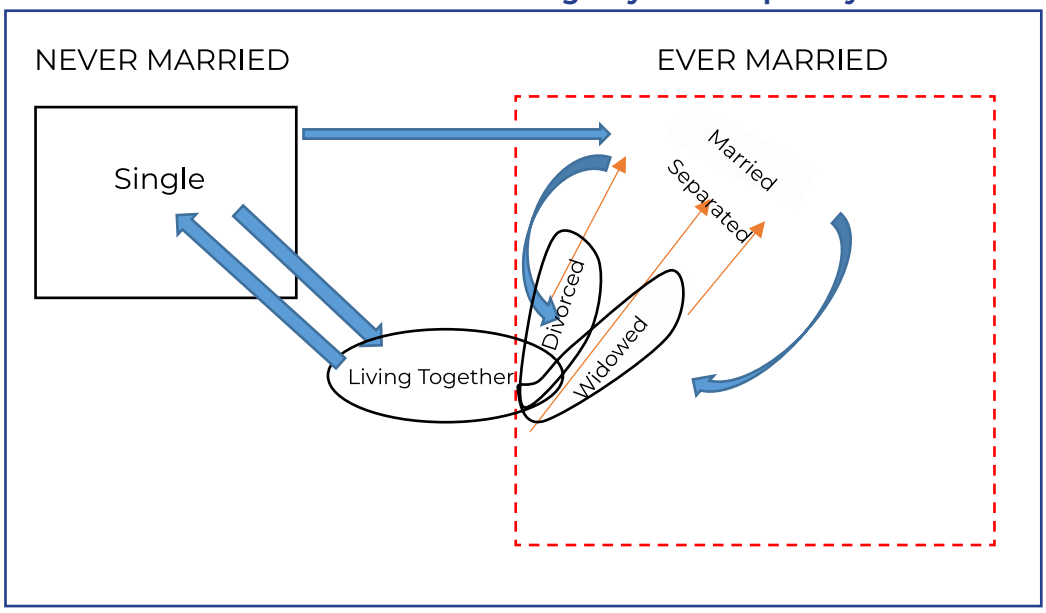
- Currently married men and women are persons who have been married and are not either divorced, widowed or separated. When data on consensual unions or other types of customary unions are reported, they are included in the currently married category to allow comparison with series where the currently married are reported together with consensual unions or other types of customary unions. This inclusion is indicated in a note. Also, categories of marital status are presented separately as reported by the National Statistical Offices or as obtained from official census publications and other data-generating agencies.

- Ever married men and women are those who have been married at least once in their lives, regardless of their current marital status.

- The percentage of never married persons can be obtained by subtracting the percentage of ever married persons from 100.

- The singulate mean age at marriage (SMAM) is the mean age at first marriage among persons who ever marry by a certain age limit, usually before the age of 50 years. It measures the average number of years lived as single or "never married" by a hypothetical cohort of individuals for which the proportions never married at each age are the same as those observed at a moment in time for a given population.

FIGURE 1: Schematic showing a cycle of nuptaliity



2.3 Objectives

This paper aims to achieve the following objectives

1. **Analyze trends in marriage rates and demographics** within Botswana. This will involve examining data on marriage rates, age at first marriage, divorce rates, and educational attainment.

2. **Evaluate the social, economic, and cultural factors** contributing to the decline in marriage in Botswana. This would involve economic hardship, specific cultural norms, or government policies.

3. **Evaluate the impact of the contributing factors on the evolving landscape of marriage**. Factors such as gender equality, economic independence, cohabitation trends

4. **Identify potential future trends** in the institution of marriage. This might involve considering the influence of changing demographics on marriage patterns.

5. **Examine alternative relationship models emerging alongside the decline in marriage**. Exploring how cohabitation, and other non-marital partnerships are shaping family structures within Botswana.

6. **Assess the potential consequences of a declining marriage rate** on the social fabric, economy, and family structures of the chosen country involve analyzing potential impacts on child well-being, social mobility, or government spending on social programs.

7. **Compare the country's trends to broader global patterns in marriage** to identify unique factors at play. This comparative analysis will determine if the decline in marriage within Botswana is part of a larger global trend or reflects specific national circumstances.

3.0 LITERATURE REVIEW

The Botswana Marriage Act1 recognises eligibility age to marry as 18 years. The 2001 amendment to the Marriage Act stipulates that no minor below the age of 21 years may marry without the consent of parents or legal guardian.

Literature shows that marriage as defined sociological and legally has been on the decline in many countries. As at 20112 the percentage of those reporting to be married in Botswana stood 17.9%. Studies indicate that an increase in age at first marriage leads to a rise in premarital sex and in the absence of contraception, this give rise to unwanted pregnancies and a rise in adolescent fertility (De Silva, 2000) Women who marry early will on average, have a longer period of exposure to the risk of pregnancy, often leading to higher fertility. Historically, societies with delayed age at first marriage, have experienced decreased fertility rates while in traditional populations in Asia and Africa where age at first marriage is younger, high levels of fertility has been observed (Bongaarts, 1987; Coale, 1971; Weeks, 2007) . Early marriage and the consequent early childbearing are related to high fertility, low status of women and adverse health risks on the mother and child. Increases in age at marriage are associated with major social-structural changes such as increases in educational attainment, urbanization, and the emergence of new roles for single women (United Nations, 1987; 1988; Lesthaeghe, Kaufmann, & Meekers, 1989; Singh & Samara, 1996) . (Jejeebhoy, 1995) analyzed 51 studies based on a number of data sources, mostly the World Fertility Surveys and Demographic and Health Surveys (DHS), and found that education is the single factor most strongly related to the postponement of marriage, but the relationship may be subject to threshold effects.

Several theoretical frameworks have been developed to understand the stages of marriage. One prominent model, Duvall's Eight Stages of Family Development (Duvall & Hill, 1948), outlines eight stages a married couple navigates from formation: Early Marriage: Childbearing and Parenting, Midlife, Later Life and retiretirement : Challenges to the Traditional Cycle Another influential model, Carter & McGoldrick's Family Life Cycle (Carter & McGoldrick, 1980), emphasizes the impact of external factors and family history on the couple's journey.The contemporary world presents challenges to the traditional model of marriage as a linear, lifelong commitment. Factors like: increased divorce rates: Easier access to divorce and changing social attitudes can lead to shorter marriages; Delaying marriage: Rising education levels and career aspirations can lead to later marriage and potentially fewer Children; Cohabitation as an alternative: Cohabitation as a long-term arrangement can be chosen over marriage, altering the traditional cycle. The rise in the prevalence of individuals cohabitating with opposite-sex partners in sexually intimate relationships outside of legal marriage. This living arrangement is known by various terms, including cohabitation, cohabiting unions, consensual unions, or living together (Mokomane, 2005). In the same vein, data from the last two Botswana Family Health Surveys (BFHS) revealed that the proportion of women aged 15-49 years who were in cohabiting unions increased from 11 to 17% between 1988 and 1996, while proportion of cohabiting unions among all unions increased from 28 to 50% between the two time periods (Mokomane, 2005).

In their reporting of the SDG 5 on Gender Equality, the author writes: "Structural gender inequality is at the root of child marriage. Girls are valued less than boys and often have little say in whom, and when, they marry. Gender equality is an effective indicator of overall progress towards a more equitable world, one we will not achieve while child marriage persists". Meanwhile SDG 5.3 seeks to: 'Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation' On that basis, as an endeavour to avail marriage related indicators, a concerted effort shall be made to report on some of the national and sustainable development goals (SDG) indicators like prevalence of child marriage by age 15 or 18 years of age, marriage rates, mean/median age at first marriage and duration of first marriage in Botswana.

4.0 METHODOLOGY

The paper will utilise the following methodology engaging statistical software like Stata, SPSS, or R for data analysis.

- **Descriptive statistics:** Analyze the distribution of marital statuses, age at first marriage, etc., across different demographics Trend analysis Compare data from multiple censuses (if available) to identify trends over time. Consider factors like economic changes, urbanization, and educational advancements.

- **Cohort analysis:** Group data by birth year (cohorts) and compare marriage patterns across different generations to determine the

- Lastly the survival analysis of marriage fitting models for computation of indicators.

5.0 FINDINGS AND DISCUSSIONS

5.1 The Current Marital Status of Botswana Population

The question on marital status targeted all those who are 10 years and older and this consists of 1,847,929 persons in Botswana who constitute 78 percent of the Botswana population. There is a group of people who have never entered into any matrimonial union who are referred to as never married. There is also those in a consensual union or co-habitation which not recognized by the Marriage Act – Living Together. All persons 10 years and older who have ever entered into a marriage institution whose current marital status is any of the following: married, separated, divorced or widowed, divorced but now living together or widowed but now living together. These are referred to as Ever Married population. They constitute 19.3 percent of the eligible population. The following questions were asked to eligible (15 years old and older) respondents

Table 1: Trends in marital status for Batswana from 1981 to 2022

MARITAL STATUS	1981	1991	2001	2011	2022
Married	40.5	26.9	17.0	17.9	15.8
Never Married	45.4	50.0	47.5	54.4	67.5
Living Together	N/A	N/A	11.6	16.4	9.0
Separated/Divorced	2.6	1.8	1.5	1.4	1.1
Widowed	6.3	4.9	3.9	3.7	2.3
Divorced now living together	N/A	N/A	N/A		0.1
Widowed now living together	N/A	N/A	N/A		0.1
Not Stated					4.2

Salient Points

- Since **1981**, the institution of marriage has been on a drastic decline when **41%** of respondents of eligible ages reporting being married, this has since dropped to **16%**.
- Those reporting to be never married continues to rise, from **45%** in **1981** to **68%**, currently. Does it mean both men and women are preferring to live single life
- There is vacillation in the population of those living under consensual union, with **12%** in **2001**, which rose to **16%** in **2011**, but has since dropped to **9%** in **2022**.
- Population reporting loss of partner to death has been on steady decline from **6.3%** in **1981** to only **2.3 percent** in **2022**, almost 3 folds reduction
- Those who reported to be either separated or divorced during the census periods as a proportion of the eligible population continues to drop. A signal that generally people prefer companionship, hence will quickly re-marry once they are divorced.

Currently the percentage of people who have been in any consensual union/marriage setup in Botswana is peaked at 28.4% that is, less than one-in-three people are in either in a marriage or co-habiting setup.

Since a conventional marriage in Botswana involves male and female couple, the expectation is that the distribution of the married, separated, and divorced categories by gender should be of the same proportion if all couples stayed together or were all in Botswana and were all enumerated on census day. Any disruptive movement like re-marrying after divorce or death of a spouse partly explains the imbalance in the distribution of marital status by gender.

Clearly the percentage distribution along sex among the categories are almost similar for the married, living together and the separated. Among the married, the percentages tend to favour females, perhaps a sign that more married males than married females were not accounted for during census. However there are significant disparities in the sex-based percentages for the marital categories of divorced, widowed and divorced but living together, with females tending to show higher percentages. A plausible explanation is that males who divorces their partners or is widowed will more likely to later re-marry a female who is single. Whereas the married category increases while remaining balanced, on the contrary this attenuates the number of divorced/widowed males. Likewise a female who prefer to remain widowed when their partner dies increases the number of the widowed females. It should be noted that the current marital status does not reveal much on the frequency of re-entry into any of the marital status categories.

Table 2: Marital Status by Sex and Age group

AGE GROUP	MARITAL STATUS							
	MARRIED	NEVER MARRIED	LIVING TOGETHER	SEPARATED	DIVORCED	WIDOWED	DIVORCED BUT NOW LIVING TOGETHER	WIDOWED BUT NOW LIVING TOGETHER
MALE								
15 – 19	23	96,522	283	1	1	-	-	-
20 – 24	651	85,815	4,097	15	4	4	-	1
25 – 29	2,886	78,337	10,493	33	48	8	2	2
30 – 34	7,738	66,255	13,840	73	164	26	8	2
35 – 39	15,890	57,157	15,721	121	415	91	40	7
40 – 44	20,569	40,857	12,435	148	728	196	99	25
45 – 49	21,614	27,752	8,610	150	1,003	371	108	41
50 – 54	18,116	16,632	5,343	151	953	516	119	48
55 – 59	14,744	11,104	3,532	122	911	709	199	73
60 – 64	12,659	7,559	2,570	101	768	824	106	73
65 – 69	10,478	5,126	1,605	112	646	994	75	75
70 – 74	7,009	3,188	1,085	79	346	837	34	69
75 – 79	4,445	1,845	520	37	194	697	27	36
80 – 84	3,149	1,336	319	23	112	630	15	33
85 or more	2,782	1,339	287	16	71	891	7	25
TOTAL	**142,753**	**500,804**	**80,740**	**1,182**	**6,364**	**6,794**	**839**	**510**
FEMALE								
10 – 14	2	112,485	6	-	-	-	-	-
15 – 19	272	93,679	1,552	6	1	1	-	-
20 – 24	2,121	80,519	10,054	43	36	9	2	1
25 – 29	6,909	73,678	15,865	90	163	29	12	4
30 – 34	14,973	61,792	16,353	145	460	136	32	8
35 – 39	23,128	54,227	14,958	195	1,010	435	74	25
40 – 44	23,286	41,383	10,233	223	1,492	918	99	75
45 – 49	19,968	29,712	6,557	238	1,697	1,687	95	94
50 – 54	15,495	21,323	3,748	206	1,608	2,497	74	95
55 – 59	13,365	17,815	2,564	177	1,491	3,549	55	98
60 – 64	10,428	14,315	1,650	169	1,201	4,423	34	96
65 – 69	7,635	10,763	888	133	872	5,049	16	76
70 – 74	4,722	6,805	485	75	475	4,548	15	65
75 – 79	2,743	4,679	217	52	269	3,715	4	38
80 – 84	1,803	3,757	148	32	166	3,259	5	18
85 or more	1,836	5,355	103	17	155	4,746	6	17
TOTAL	**148,686**	**632,287**	**85,381**	**1,801**	**11,096**	**35,001**	**523**	**710**

5.1.1 Determining the State of Marriage in Botswana

A respondent could have been in their first marriage at the time of the census, in which case adding the duration of their first marriage and the age of the person at first marriage should yield one's current age. Any discrepancy in the computation outcome would be indicative of two possibilities. If currently married, that the respondent could have at some point, exited the first marriage (separated, divorced or lost a partner to death) and re-married again later, implying that they are in their second or third marriage. A discrepancy of one year for someone whose marital status is married, will for this analysis, be treated as still in first marriage. If in any other status, they could have stayed in this new status for the duration of the un-accounted time period or they could have exited the marriage, re-married and then exited again to be in the current status. All these would render one no longer in the first marriage. Those with a discrepancy of 2 or more years were however, excluded because there is a great chance that they could have exited and re-married within those un-accounted years.

The largest contributor to change from first marriage to other marital status is being widowed, occurring among 45 percent of respondents who had ever-married at the time of census. This is followed by those with unexplained circumstaces for exiting the first marriage even though they are in their second or higher marriage, at 30 percent, while divorce contributes 19 percent.

5.2 Age at First Marriage

In general, Batswana get into a legal marriage institution at the median age of 33 years for males and 27 years for females. This is a six-year gap between the two groups, in line with Setswana tradition that expects males to generally marry a younger partner. In the case of co-habitation, males on average commence co-habiting at the median age of 28 years while females start at the median age of 24 years.

Table 3: Age (median years) at first marriage for different marital status and sex

CURRENT MARRIAGE STATUS	MEDIAN AGE AT FIRST MARRIAGE		MEDIAN CURRENT AGE		DURATION OF FIRST MARRIAGE	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
First Marriage	34	29	49	44	12	12
Other Marriage	28	23	60	58	15	19
Separated	30	24	51	48	10	10
Divorced	32	25	54	52	10	10
Widowed	31	23	68	68	22	28
Divorced but now living together	31	26	56	47	10	8
Widowed but now living together	33	24	63	57	13	14

Both males and females whom in marrying for the first time, delayed their matrimonial union by marrying at median ages of 34 years and 29 years respectively, are reported to be still in their first marriage. These cohorts are of median ages of 49 years for males and 44 years for females at the time of the population census. However for both males and females whose first marriage had occurred earlier in their lifes at median ages of 28 and 23 years respectively, have exited their first marriage and currently have re-married. These cohort currently belong to the older age group at 60 years for males and 58 years for females. This is to say, as they change their partner, they tend to narrow the age difference between them. In the process this drastically reduces their average age difference from 5 years at first marriage to 2 years at the time of census. One possibility is that a significant proportion of older females who were widowed, are re-marrying.

The effect of age differences between the male and female groups is apparent among males and females who are currently widowed. Males who reported being widowed had on average had their first marriage at 31 years of age against females who married for the first time at age 23 years. Inferring on those alive, one can conclude that older males had married into the younger female cohort at first marriage and on average these older males died leaving behind females partners who now had small age difference with their widowed male counterparts.

5.2.1 Combinatorial Effects of Age-at-first marriage

The age at which someone commits to a matrimonial union may have bearing on certain outcomes in one's life. Whereas for some of the couples, early age of first marriage has bearing on their fertility, it also could be indicative of whether one remains in that marriage or may opt for early exit through divorce, re-marrying or divorcing followed by co-habitation. Yet for some, because of the level of education they may possess, this may lead to a delayed first union. When finally marriage is achieved, because of level of maturity gained while still single, this yields elongated stay in their first marriage, only to be interrupted by loss of spouse, rendering them being of widowed status. These phenomena tend to be gender sensitive. Even though there is no clear evidence of education influencing age-at-first marriage among males, however the tradition of expecting the bride to be younger than the groom often disadvantages females. Economic conditions, cultural norms, level of education, etc. are some of the factors that may compel young females to be in a consensual union at a young age.

PHC data shows that females with primary or lower levels of education who have remained in their first marriage, had first marriage at younger ages (26 years) compared to females possessing secondary levels of education or higher (29 years). The same applies among those who exited their first marriage (22 years vs 26 years). Consistently with higher levels of education, age at first marriage increases, with females who remain in their first marriage tending to have had their first marriage at older ages. Clearly, females with lower levels of education and had exited their first marriage, had married at youngest age (22 years), among all females cohorts.

The reverse is observed with males. Males who have remained in their first mariage delayed their age of first marriage, with older ages observed among those with lower levels of education (34 years or older). Perhaps the burden of accumulating bride price prior to first marriage had played a role. However, irrespective of level of education, males who have remained in their first marriage tended to have entered their first consensual union at older ages (33 years or older) when compared to those who have exited their first marriage whose first marriage was at the average age of 30 years.

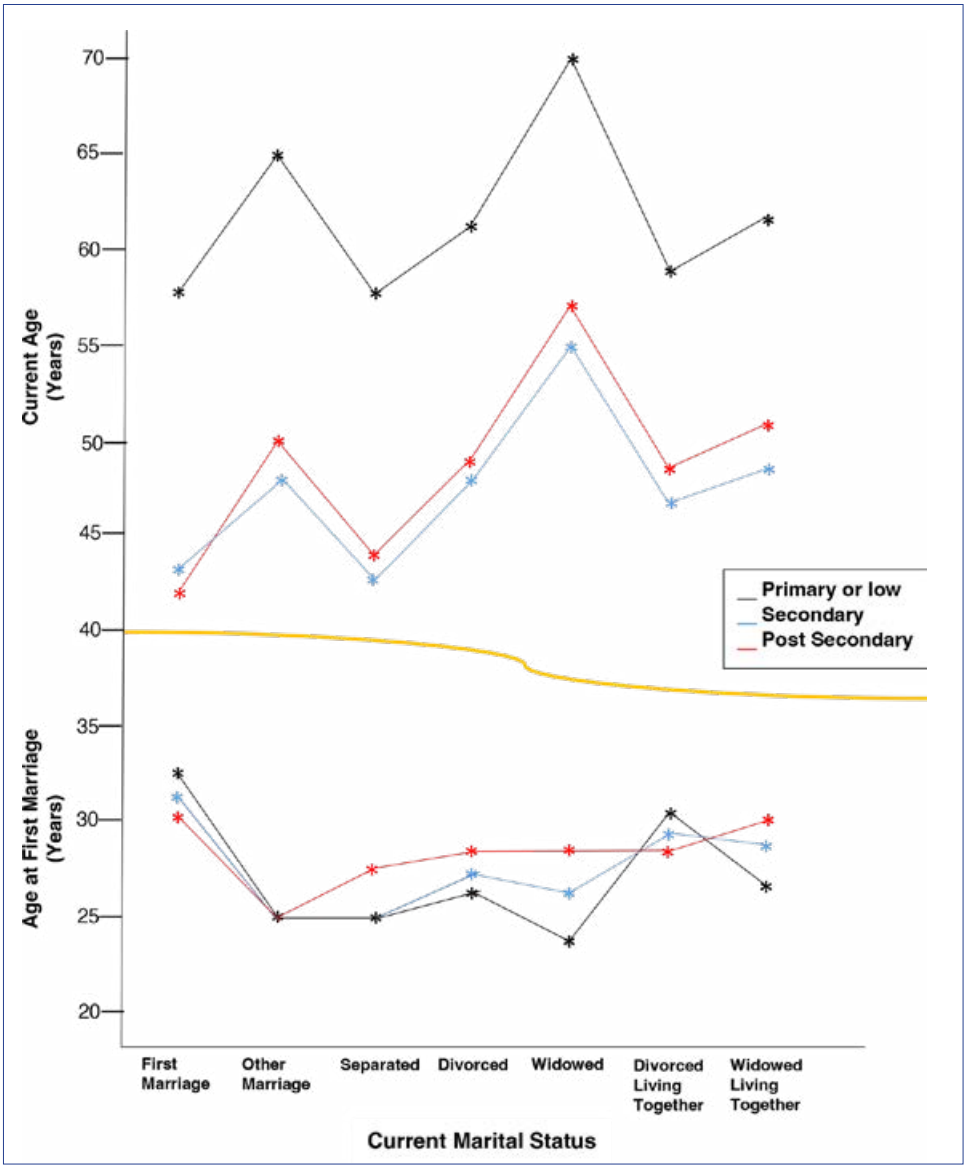
Table 4: Age at first marriage by Sex and Education

	FIRST MARRIAGE				EXITED FIRST MARRIAGE			
	SEX				SEX			
	MALE		FEMALE		MALE		FEMALE	
	AGE 1ST_MARRIAGE		AGE 1ST_MARRIAGE		AGE 1ST_MARRIAGE		AGE 1ST_MARRIAGE	
LEVEL OF EDUCATION	MEDIAN	COUNT	MEDIAN	COUNT	MEDIAN	COUNT	MEDIAN	COUNT
PRESCHOOL	35	165	27	143	30	78	22	252
NON-FORMAL	34	1,563	26	1,507	30	546	22	2,462
PRIMARY	36	22,360	29	23,780	30	6612	23	21,649
SECONDARY	33	41,319	29	49,279	29	7093	25	14,049
POST SECONDARY	33	47,744	29	48,902	30	7096	26	11,113

The population with primary or lower education constitutes the oldest generation (median age over 58 years) across all the current ages of ever-married respondents. They also married at young ages (median age of 26 years) for their first marriages, except those who are widowed and now living together **(Figure 2)**.

There is an interactive effect between age-at-first marriage and education on the correct marital status of the respondents, **(Figure 2)**. Batswana with post-secondary education that remain in their first marriage or divorced but now-living- together are the ones who married at relatively younger ages compared to age-at-first marriage for other education levels. However, the scenario changes amongst those currently separated, divorced or widowed, where the cohort with post-secondary education married at relatively older ages.

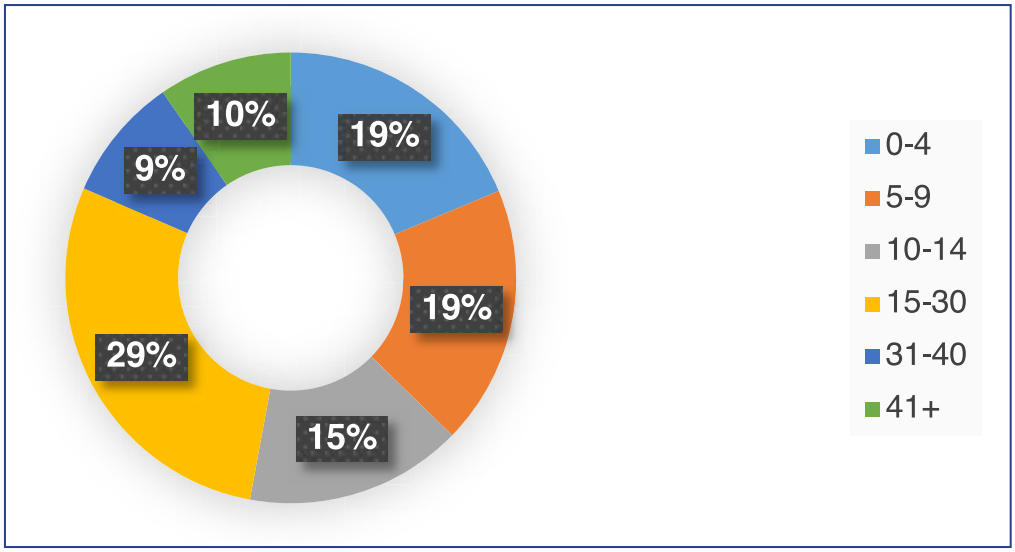
FIGURE 2: Median Age at First Marriage for different Marital Status and Education Level



5.3 Modelling factors Influencing Duration of First marriage

The period between first marriage and termination of the marriage through divorce, widowed or otherwise gives the duration of first marriage. In 2018 the median duration for individuals in a first marriage in US was 21 years which is higher than in Botswana, which is 13 years in 2022. The longest duration interval of first marriages is more than 40 years and constitute 10 percent of all marriages. The largest proportion of marriages are those that have lasted between 15 and 30 years which constitutes 29% of all marriages, **(Figure 3).**

FIGURE 3: Percentage distribution of Duration of first Marriage (Years)



The cohort whose first marriage commenced at early ages of their life of 25 years or less and were still married, had their first marriage lasting for an average of 22 years. Meanwhile among those who have exited the first marriage, the average duration of first marriage had lasted 24 years. Delaying one's age at first marriage to between 26 and 50 years, reduces the median duration of first marriage to 10 years.

5.4 Factors affecting Duration of First Marriage

Without taking into consideration the effect of other factors, females who have exited first marriage tend to stay longer (20 years) in the first marriage than males (14 years) of the same marital status. However there is no difference in the duration of first marriage between males and females because these are couples. Association between one's level of education and duration of first marriage is demonstrated on **Table 5**, which shows that the median duration of first marriage decreases with one's level of education. The average duration of first marriage among females with primary schooling or lower, is 25 years while that of males is 19 years. Those with higher education have even lower duration for both sexes. The duration drops more than two folds to 10 years among those with secondary education or higher.

There is also evidence of disparities between current marital status. The widowed are exhibiting longer median duration at 28 years for females and 22 years for males.

Table 5: Median duration of first marriage by Level of education and Sex

	SEX			
	MALE		FEMALE	
	DURATION OF FIRST MARRIAGE			
EDUCATION LEVEL	MEDIAN	COUNT	MEDIAN	COUNT
Primary or low	19	31,324	25	49,793
Secondary	10	48,412	10	63,328
Post-Secondary	10	54,840	10	60,015

Widows reported having the longest duration of first marriage, implying that generally the male spouses died at older ages. However there is a widowed section that lost their spouses at short duration of first marriage (13 years for male and 14 years for female), and have preferred living together with new partners. Interestingly couples that divorced tended to have the same median duration whether they stayed divorced or moved on to new unofficial union, however females tend to delay that movement.

Table 6: Median duration of first marriage for different marital status and sex

MARITAL STATUS	SEX			
	MALE		FEMALE	
	MEDIAN	COUNT	MEDIAN	COUNT
First Marriage	12	13,0516	12	133,275
Other Marriage	15	12,237	19	15,412
Separated	10	1,182	10	1,801
Divorced	10	6,364	10	11,096
Widowed	22	6,794	28	35,001
Divorced living together	10	839	8	523
Widowed living together	13	510	14	710

5.4.1 Fitting a Cox's Proportional Hazard Model on duration of first marriage

Duration of first marriage measures time to termination of a matrimonial union between a couple due to either divorce or loss of a spouse. However, not all marriages ends in the termination since some will be on-going at the time of the census hence their time of termination remains unknown – right censored. Excluding these cases from the computation of average duration of marriages will yield erroneous results. However their inclusion in the analysis requires an indicator variable that distinguishes between exact duration and on-going first marriages, the right-censoring variable. A Cox model is a statistical technique that is used for survival-time (time-to-event) outcomes on one or more predictors. The response variable is the hazard function $\lambda(t)$, which assesses the probability that the event of interest (in this case, exiting first marriage) occurred before t. A Cox's Model is applied instead of fitting a conventional regression model, which would been appropriate if all cases had the exact duration of first marriage. The model provide an estimation of a factor's effect on the **survival rate** after adjusting for other influencing variables. It should be borne in mind that the model coefficients are population parameters.

Generally, duration of first marriage for females is longer than that for males, possibly because being widowed (lose of spouse) which is a major contributor to failure of first marriage, is more prevalent among women than men at a ratio of 5 to 1. **(see table 6)**. Thus probability of first marriage resulting in failure (divorce, widowed, etc.) is reduced by 48 percent for females compared to males, with a hazard risk of 0.606, explaining why on average females have longer duration of first marriage than males.

Table 7: Results of fitting a Cox's Proportional hazards Model

VARIABLES	HAZARD RATIO
Sex	
Female	0.676
EDUCATION Level	
Primary or low	0.947
Secondary	1.124
Current Age	
Young	2.067
Middle Age	1.508
Age at first marriage	
10-25 Years	0.410
26-50 years	0.588

FIGURE 4a: Survival curves for different marital status

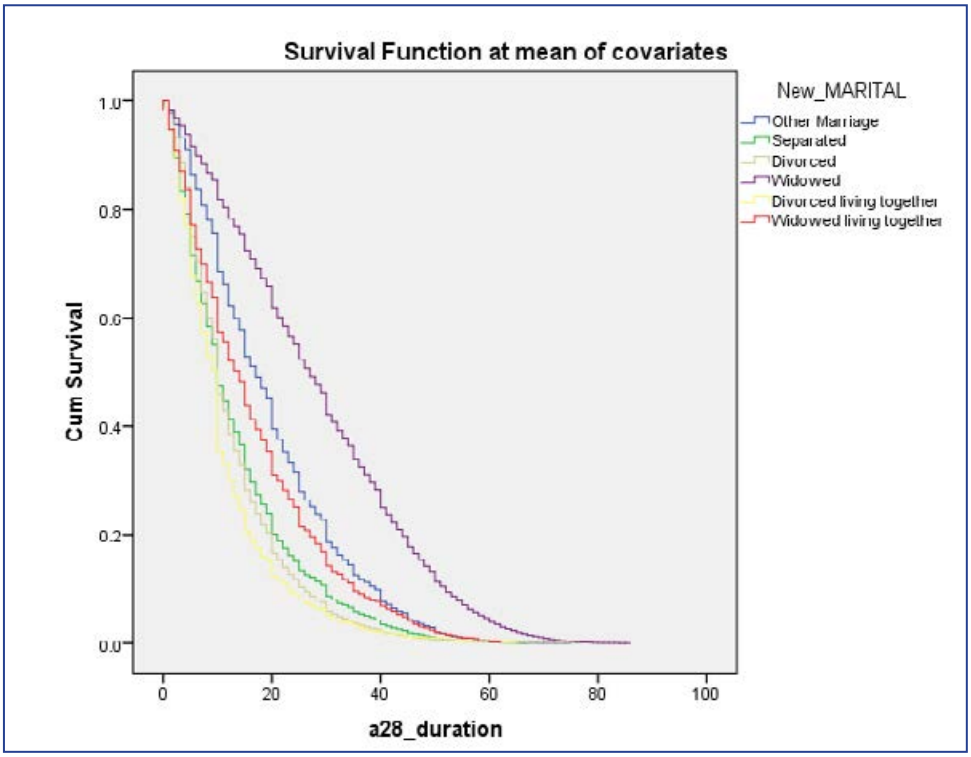
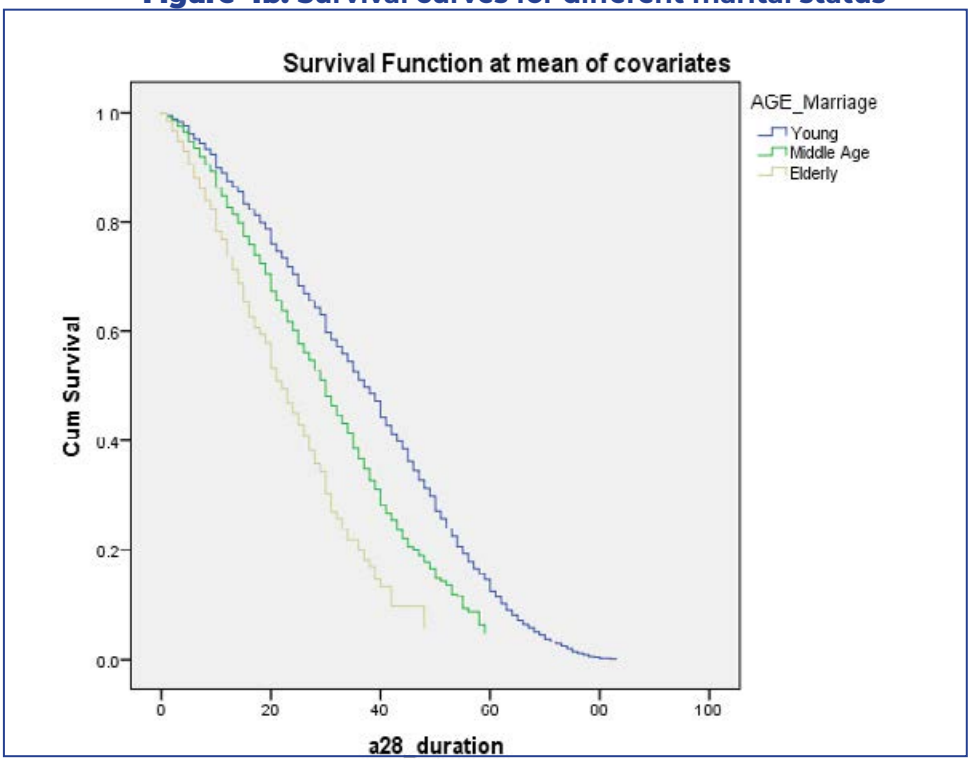


Figure 4b: Survival curves for different marital status



The hazard ratio **(Table 7)** for primary or low education when compared to post-secondary education will lower the risk of failure of the first marriage by 6%. Likewise respondents who had first marriage at young age (risk reduced by 243%) or middle age (risk reduced by 70%) compared to when ones who married at older age (> 50 years) had their risk of failure of first marriage reduced. Interestingly being currently young, increases the risk of failure of first marriage when compared to the older generation.

5.5 Computation of Marriage indicators

Median age-at-first marriage for males is 33 years
Median age at first marriage for females is 27 years
Median duration of first marriage for males is 12 years
Median duration of first marriage for females is 14 years

5.6 Under-Age First Marriage Indicator

In their reporting of the SDG on Gender Equality, the author writes: "Structural gender inequality is at the root of child marriage. Girls are valued less than boys and often have little say in whom, and when, they marry. Gender equality is an effective indicator of overall progress towards a more equitable world, one we will not achieve while child marriage persists". Meanwhile SDG 5.3 seeks to: 'Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation'. The percentage of women (or men) aged 20-24 who were married or in union before age 15 and before age 18 is a Sustainable Development Goals (SDG) Indicator for monitoring progress toward ending child, early, and forced marriage (SDG Indicator 5.3.1).

A total of 194 132 Batswana of ages between 20 and 24 years of age were enumerated and 2887 of them were ever married. However, 382 of them married before the age of 18 years. This constitutes 197 cases per 100,000 population of those who are 20-24 years and were married before the age of 18 years.

The four dominant languages spoken at the households from which these 2887 youth came from are Seshona (40%), Setswana (22%), English (16%) and Setebele (8%).

5.7 Crude Marriage Rate

Crude marriage rate is the number of marriages in a given year per 1,000 people in the population.

$$\text{Crude marriage Rate: CMR} = \frac{(\text{Number of marriages in a year})}{(\text{Mid-year Population})} \times 1000$$

PHC data shows that in 2021, there were 7080 females who got married, the assumption being that all these married to male spouses hence 7080 marriages for that year. This gives a crude marriage rate of 3 marriages per 1000 population. This is slightly higher than that of South Africa, which estimated at 2 per 1000 population.

6.0 CONSEQUENCES AND POLICY IMPLICATIONS

The decline in marriage rates has social and economic implications. A decrease in family formation can lead to population aging and a shrinking workforce. Additionally, single-parent households may face economic hardship, potentially impacting child well-being. However, it is important to acknowledge that the decline in marriage may not always be a negative development. Increased individual autonomy and alternative family arrangements can also lead to greater social well-being.

Policymakers should consider these multifaceted trends when formulating social policies. Policies that address economic concerns, such as affordable childcare and housing, could make marriage a more viable option for some individuals. Additionally, promoting gender equality and supporting work-life balance could contribute to a more equal distribution of domestic responsibilities within marriages. Ultimately, a nuanced approach that acknowledges both the challenges and opportunities presented by the decline in marriage is necessary.

Effective implementation of the TDP requires a data-driven approach that considers the multifaceted connections between national development goals and marriage trends. While data from censusesvprovides valuable insights, policy makers can leverage this data to formulate policies that:

- **Promote gender equality in education and employment:** This can empower women and may influence their marriage decisions, encouraging a more balanced distribution of domestic responsibilities.
- **Strengthen social safety nets:** This can ensure well-being for all individuals and families, regardless of marital status, reducing poverty and promoting social inclusion.
- **Invest in childcare and eldercare services:** This can support working families, particularly married couples with children, and potentially make marriage a more viable option for some individuals.

7.0 CONCLUSION

The decline in marriage rates in Botswana reflects a complex interplay of socio-economic factors and evolving social norms. While the long-term consequences of this trend remain uncertain, understanding the driving forces behind it is crucial for informed policy decisions and a deeper understanding of the changing nature of families in the 21st century. Understanding the factors influencing age at first marriage requires a multidisciplinary approach that considers both socioeconomic and cultural forces. This knowledge can inform policy decisions aimed at supporting healthy and stable marital relationships, while acknowledging the evolving social landscape and diverse needs of individuals across cultures and economic circumstances. Understanding marriage as a dynamic cycle is essential for individuals, therapists, and policymakers. Examining the established models and acknowledging contemporary challenges provides a comprehensive framework for navigating this complex social institution. As societal norms evolve, the cycle of marriage itself is likely to adapt and transform, requiring ongoing research and nuanced approaches to understand and support healthy and fulfilling marital relationships.

- Batswana continue to delay their age of first marriage for both males and females.
- Certain ethnic groups continue to marry off their children at a tender age, before the age of 18 years, especially female ones.
- Delayed first matrimonial union is associated with prolonged first marriage
- Widowed spouses who stay widowed had a long duration of first marriage, while those who either re-marry or are living together are one who had shorter first marriage.
- Higher levels of education are associated with shorter duration of first marriages irrespective of the current age.

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FACTORS ASSOCIATED WITH NUPTIALITY IN BOTSWANA: AN ANALYSIS OF THE 2022 POPULATION AND HOUSING CENSUS

NEO CORNELIAH SEBOLAO

EXECUTIVE SUMMARY

Most studies in Africa on nuptiality usually take an anthropological approach in analysing nuptiality and some associates nuptiality to fertility and reproduction. Research on nuptiality, or marriage patterns, in Botswana is crucial for several reasons specific to the country's context. It mirrors the social dynamics occurring in Botswana. The country is a rapidly changing society where traditional marriage patterns are evolving due to urbanization, education, and economic development. Understanding how these changes impact marriage rates, age at marriage, and the type of marital status (such as married; never married, divorced, separated, widowed; living together/ cohabitating (living together, divorced and now living together, widowed and now living together) and not stated is essential for policymakers, sociologists, and anthropologists to grasp the shifting social dynamics. A deeper understanding of the determinants of nuptiality would no doubt enhance national planning programmes. Research on nuptiality provides policymakers with evidence-based insights to design interventions related to family planning, education, healthcare, and social welfare as well as delving into challenges related to gender inequality which is prevalent in Botswana like any other African countries.

Evidence from previous census data shows that in Botswana the respondents who reported being married decreased from 27% in 2001 to 20.0% in 2011 while those not married increased from 49.3 % to 57.7 %, respondents living together or cohabiting in 2001 and 2011 declined from 23.7% to 21.5% respectively. The findings from the 2022 census shows that the percentage of married was 15.8%, living together (13.4%) and not married 70.9%. Worth noting is the further decline in living together/ cohabitating across the three censuses, 2001 (23.7%) 2011 (21.5%) and 15% in 2022. This is despite the inclusion of a wider meaning of living together in 2022. In 2022 living together/ cohabitating included living together, divorced and now living together, widowed and now living together. However, the proportion of never married increased over the three censuses 2001 (49, 3%); 2011 (57.7%) and 2022 (63.1%). This implies that a large proportion of never married in Botswana in turn affect fertility rates as marriage is often associated with childbearing. A higher proportion of never-married individuals may lead to lower fertility rates, impacting population growth. If a significant portion of the population remains unmarried throughout their lives, it may contribute to an aging population, as marriage and family formation are often associated with earlier childbearing.

The Singulate Mean Age at Marriage to examine the age at first marriage. Surprisingly, the results showed that Singulate Mean Age at Marriage estimates was 33 years for females and 27 males. Females are more likely to be marry early to hit the biological clock. However, in the 2022 census the opposite was true. This can be attributed to the following factors: Higher levels of education among females can delay marriage; suggest that females in Botswana are this is largely because men tend to remarry soon after, more females are choosing to pursue careers and financial independence before getting married; changing gender roles thus shifting societal attitudes towards females marrying earlier than males; economic independence among females and access to contraception and family planning by females implies a greater autonomy or greater control over their reproductive choices outside marriage unions.

There is no clear nuptiality pattern by Age, Sex and distribution by Marital Status from the 2022 Population and Housing Census. Nuptiality data by age and sex across all the census show that marriage is almost universal. The proportion married increase with an increase in age for both male and females. Generally, the highest proportion of living together or cohabitating was recorded among males in most age groups except among women aged 15-19 and 20-24 with 5% and 16.35% respectively. Overall, living together declined with age for females. Implicit in these rates is the fact that male tend to remarry soon after marital dissolution, be it as a result of death of a spouse or divorce. (Re-marriage rates cannot be estimated from data). Conclusively, living together is a common phenomenon for males.

Multinomial regression model was used to examine the relationship of marital status controlling for social-demographic factors and married was selected as the reference category. Females had a higher likelihood of being married compared to males, log-odds of being married significantly reduced among individuals who were employed compared to those unemployed, and those with secondary education had better odds of marriage than those with only primary education. Conversely, those with secondary education had a higher odd of cohabitation compared to marriage, individuals aged 18-24 were more likely to be married than those aged 15-17, the log-odds of being married were lower in the urban areas compared with the rural areas. Respondents residing in urban areas were less likely to be married compared to those living in rural areas. Thus, efforts in understanding changing patterns of marriages are the ultimate bases of tracking the country's demographic transition. Previous studies have used multinomial regression to explore the risk of being married, the odds of living together, married and never married (Rutaremnwe G (2014; (Mangomebe etal., 2022).

1. BACKGROUND AND INTRODUCTION

Globally, family demographers have extensively conducted studies and documented factors affecting marital status and have investigated nuptiality patterns in Africa. African countries suffer from a registration system with incomplete vital statistics (UNICEF, 2017). Consequently, censuses and surveys become key sources of demographic information including nuptiality. The recent round of censuses collect information on individual characteristics, fertility, employment, migration, mortality, nuptiality and household characteristics. Analysis into nuptiality in the African censuses permits an approximation of patterns at the national and regional levels within countries.

Nuptiality levels and patterns are a mirror reflection of the socio-demographic characteristics, economic as well as socio-cultural norms and values of group or country. Nevertheless, demographers are more interested in studying nuptiality as proxy largely as an important determinant of fertility. Nuptiality is often used as a proxy for fertility, exposure to sex and pregnancy (ZIMSTAT and UNFPA, 2015). Thus, the impact of nuptiality is largely determined by the extent to which sex and childbearing is assumed to occur within marriage. In societies where child bearing in cohabitating union or out of marriage is heavily stigmatized, a rise in cohabitation has changed the normal formation of family structure in Africa (Odimegwu et al., 2018) and it had been recorded in African countries for instance, in South Africa, (Posel and Rudwick, 2013). Another notable change in Africa is postponement of marriage or age at entry into marriage with Botswana, South Africa and Namibia recording the highest singulate mean at age.

Undeniably, there is need to integrate important national, regional, and international planning frameworks such as Vision 2036, the Revised National Policy on Population (RNPP), the African Union's Agenda 2063, the

African Agenda for Demographic Dividend (AADPD), and the Sustainable Development Goals (SDGs) into the nuptiality study would be highly beneficial for informing policy within the context of Botswana. An effort to align these frameworks when studying nuptiality contribute directly in attaining national goals related to social development, gender equality, and economic prosperity. Incorporating frameworks such as Regional Integration and Cooperation: Agenda 2063 into nuptiality study acknowledges Botswana's commitment to regional cooperation and ensures that the research outcomes resonate with broader African development agendas
In addition, Africa still have a young population which policy makers need to take advantage of in their development spheres. Therefore, the AADPD focuses on harnessing the demographic dividend by investing in youth empowerment, education, and health. Understanding marriage patterns and their implications for demographic trends, such as age at marriage and fertility rates, is essential for maximizing the demographic dividend in Botswana.

Lastly, nuptiality studies in Botswana are directly aimed at attaining the following SGDs: Goal 5 (Gender Equality) and Goal 3 (Good Health and Well-being). These are aimed in addressing global challenges, including poverty, gender inequality, health, and environmental sustainability. Aligning the nuptiality study with specific SDGs, such as, policymakers can demonstrate Botswana's commitment to global sustainability and contribute to achieving international development targets.

Theoretical Consideration

A number of theories and research findings on factors influencing nuptiality patterns and levels are many, the current study will utilise .Becker's economic theory of the family that posits, the gender role assignment within the family motivates for marriage for women while the boy who is expected to be a husband specializes in the labour market while the wife specializes in home making (Becker, 1973). Acquiring education and gaining paid employment in the labour market results in relative improvements in women's economic position as she gains financial independence and is set free from economic dependence on the husband within the marriage institution. As a consequence, expected gender role specialization gains within the marriage institution gets reduced making marriage less attractive to women (Becker 1973). This view is supported by other scholars (Oppenheimer, 1988; Oppenheimer 1997; Xie, Raymo, Goyettee, Arland and Thornton, 2003; Saardchom and Lemaire 2008; Jones and Gubhaju 2009; Stier and Shavit, 1994).

They argue that, women's demand for higher education has been associated with the increase and availability of labour market opportunities for women leading to prolonged schooling hence delayed entry into marriage. Further, Oppenheimer (1997) suggested that marriage timing is delayed by an extended period of spouse search. In this model, women with greater economic resources experience extended period of spouse search process as their economic power and financial ability incentivizes them to undertake more focused and extended searches for spouses in the marriage market (Xie, Raymo, Goyettee, Arland& Thornton, 2003).

Other demographic studies have supported the same view that, a rise in women educational attainment as a function of their increasing years of schooling and their participation in the labour market likely increases their economic independence (Haya Stier and Yossi Shavit, 1994; Stevenson & Wolfers, 2007). Further, an activity such as schooling is naturally time consuming hence delay marriage (Hogan, 1978). One other explanation is possibly that, school attendance is incompatible with marriage (Mensch, Singh and Casterline, 2005). Delayed completion of education delays commencement of post education life such as career development and entry into new life status including marital life (Jones and Gubhaju, 2009). The other reasons advanced are that education enhances the girl's autonomy as well as greater influence on the timing of marriage and the selection of suitable partners (Mensch, Singh and Casterline, 2005).

Carter and Glick (1970) cited in Hogan (1978), regarding socioeconomic differentials in marriage found out that men who drop out of school and failing to complete their degree has poorer marriage prospects and experience increased age at marriage. Edin and Reed (2005), who found in their study 'Why

Don't They Just Get Married? Barriers to Marriage among the Disadvantaged' that economic barriers theoretically influence the marriage rates of the poor encompassing low earnings and employment among unskilled men and that disadvantaged men consider some degree of financial stability as a prerequisite for marriage. Thus, the above factors are expected to influence nuptiality in Botswana utilizing the latest 2022 census data.

1.1. Objectives

The overall objective of this study is therefore to undertake further analysis of the 2022 Census with the view of providing more insights into factors that influence nuptiality levels and trends in Botswana using data for 2022 Population and Housing Census, the specific objectives are to:

- Assess nuptiality levels and trends;
- Compute Singulate Mean Age at Marriage (SMAM)
- Examine the socio-demographic determinants of the 2022 census in order to discern the relative risk ratio of not married relative to married as well as the relative risk ratio of never married relative to married

2. DATA AND METHODS

2.1 Source of data

We used data from the 2022 Botswana National Population Census. The decennial national censuses collect data on various demographic and health indicators including marital status, maternal and child health, as well as fertility data, employment, occupation, migration and mortality. Permission to use the data sets was sought from Statistics Botswana. Accessible information on the dataset is hosted on the Botswana National Census website (https://www.statsbots.org.bw/census-2022). The Botswana Housing and Population Census is a comprehensive census, spanning the entire nation, and serves as a valuable resource for gauging the well-being of women and children through a broad spectrum of indicators. The survey was conducted through the collaborative efforts of the government of Botswana and other key stakeholders.

2.2 Data collection methods and procedures

The data was collected using appropriate statistical population enumeration methods. The census classified urban and rural areas within each district as the main sampling strata, and all the housing units were enumerated. Specifically, a predetermined number of census enumeration areas (EA) were counted systematically with probability proportional to size within each EA. To clean and analyse the data, SPSS was used. Data completeness was checked and missing cases in some outcome and explanatory variables were removed. Ultimately, only variables with complete cases were included in the study.

2.3 Measures

2.3.1 Outcome variable

The dependent variable used in this study was marital status. Marital status was categorized as 1= married; 2= never married, divorced, separated, widowed; 3 = Living together/ cohabitating (Living together, divorced and now living together, widowed and now living together and not stated). The rationale for category 2 was all were not currently in a union; 1 married; and 3 = living together/ cohabiting. Then a multinomial variable was developed. To ensure the reliability of the results, the outcome variable has been assigned specific codes for each category. This approach facilitates the creation of more robust models that can withstand the inherent variability of the data, thus enabling accurate and effective analysis of the pertinent factors contributing to marital status.

2.3.2 Explanatory variables

Studies have revealed several factors that contribute to precarious decision-making to marriage. To gain a deeper understanding of this issue, this research analysed socio-demographic variables including Age =15-19. 20-24, 25-29, 30-34, 35-39. 40-44, 45-49, 50+, Sex =male and female, Religion= 1 Christian, 2 = Other; Education Level = 1 Primary, 2= Secondary, 3=Tertiary; Place of residence =1 rural, 2 =urban, Employment status =1 Employed, 2 =Unemployed. These variables were regressed against marital status to see the key influential factors.

3. STATISTICAL ANALYSIS

The study utilized SPSS, for data cleaning and analysis. Assessment of Marital Status involved the use of frequencies and percentages, and the study utilised the Chi-Square test to examine the relationship between the outcome variable and explanatory variables. To ensure the reliability of our statistical inferences, we checked for multicollinearity within the explanatory variables using the adjusted variance inflation factor (VIF) for survey design. None of the explanatory variables had a VIF greater than 10, indicating that there was no multicollinearity within our predictor variables. Multinomial - Logistic Regression was used to identify potential risk variables categories. To critically examine the relationship between outcome variables and predictor variables, Odds Ratios were also analysed together with their Confidence intervals.

Only variables that proved significant at $p<0.05$ were included in the final model, which reported results using odds ratios since the model was controlled for confounding effects of covariates. We also checked the overall goodness of fit of the multivariate logistic regression models using measures like the Akaike Information Criterion (AIC), and the Likelihood ratio test, and the model was found to be parsimonious. Furthermore, we carried out model diagnostics to ensure that the assumptions of the Multinomial logistic regression model were not violated.

3. 2 Multinomial Logistic Regression Analysis

3. 3 Model Building and Parameter Estimation

Multicollinearity

To assess the impact of multi-collinearity on the regression results, multi-collinearity checks on predictor variables were performed by calculating the Adjusted Variance Inflation Factor (VFI). As the rule suggests VIF for predictor variables below the threshold of 5 and 10 suggests that there is no substantial multi-collinearity within our predictor variables. The results show that there was no multi-collinearity within our predictor variables hence problems of unreliable coefficient estimates, inflated standard errors and misrepresentation of variable importance were not the case within our predictor variables. The VIF for the independent variables ranged below 10, suggesting no multicollinearity.

Multinomial Logistic Regression Analysis

The final part of our analysis involved using Multinomial logistic regression to examine the relationship between Marital Status and a set of socio-demographic independent variables including Age, Religion, Sex, Place of Residence, Employment status, and Educational level. Multinomial logistic regression was used because it allows us to predict the probability of an observation belonging to each category of the dependent variable. Multinomial logistic regression is a statistical technique used when the dependent variable has more than two nominal (unordered) categories. In the current context of nuptiality study, the dependent variable used in this study was marital status. Marital status was categorized as 1= married; 2= never married, divorced, separated, widowed; 3 = Living together/ cohabitating (Living together, divorced and now living together, widowed and now living together and not stated).

It is useful in our case because we wanted to understand how the independent variables affect the likelihood of belonging to each category compared to a reference category. This type of analysis enables us to compare the odds or probabilities of each category relative to a reference category, providing valuable insights into the data.

Interpretation of predictor variables versus the outcome variable in the Model.

Utilizing a regression model, we analysed the influence of marital status on five predictor variables, with the baseline category being "married". This was then compared to the categories of "living together" and "not married". The dependent variable's reference category was "married". Through a multinomial logistic regression test, we were able to explain the impact of each category while keeping other factors constant. The regression coefficients were then presented for each predictor variable across all categories of the study. Researchers are interested in understanding how various risk factors or explanatory variables relate to different marriage outcomes. Multinomial logistic regression allows for the examination of the relationship between multiple independent variables and the multiple categories of the dependent variable simultaneously.

Control for Confounding Variables: By including multiple independent variables in the regression model, researchers can control for potential confounding variables that may influence marriage outcomes. This helps to isolate the unique effects of each risk factor on different categories of nuptiality. Multinomial logistic regression provides estimates of odds ratios for each category of the dependent variable compared to a reference category. These odds ratios indicate the relative likelihood of belonging to each category of the dependent variable based on the values of the independent variables. This allows researchers to assess the strength and direction of the relationships between risk factors and marriage outcomes.

3.4 Singulate Mean Age at Marriage (SMAM)

The measure of the timing of family formation used in this analysis is Singulate Mean Age at Marriage (SMAM). The SMAM is the average length of single life expressed in years among those who marry before age 50. This is perhaps the most commonly used measure of the mean age at which people marry for the first time. The SMAM is calculated from the proportions single by age as indicated in the following five steps:

Step 1. Calculation of the person-years lived in a single state, denoted by A:

A=a_0+∑_ (15-19) ^ (45-49) S

Where S is the proportion single in age group a.

Step 2. Estimation of the proportion remaining single at age 50, denoted

By B:

B = (S45–49 + S50–54)/2

If the proportion single in age-group 50–54, S50–54, is not available, then

B =S45–49

Step 3. Estimation of the proportion ever marrying by age 50, denoted by C:
C =1–B

Step 4. Calculation of the number of person-years lived by the proportion

Not Marrying, denoted by D:
D = 50*B

Step 5. Calculation of SMAM:

SMAM = (A–D)/C

4. ETHICAL APPROVAL AND DATA AVAILABILITY

An analysis was conducted on a population-based dataset and the researcher obtained official permission to access the dataset from data archives officials. Informed consent and voluntary participation were obtained from all participants before any data was collected. To ensure privacy, the final data was separated from unique identifiers of names and locations, guaranteeing confidentiality and anonymity to all participants. Also, an oath of secrecy was deposed to by the Author administered by Statistics Botswana.

5. RESULTS

5.1 Proportional Age Distribution Analysis

Table 1 shows the frequency distribution of the age variable, it was found that the majority of individuals in the census were between the ages of 0 and 88+. The study's participants were mainly young, with a gradual decline as people got older. The mean age was 28. 16, SD 20.19. The total population under study was 2 359 609. Age groups were divided into the following categories: 15-17, 18-24, 25-34, 35-39, 40-44, 45-49, 50-54, and 55+ years. Table 1 shows the proportional distribution of age groups across all categories. The 0-14 age group was not necessarily included in the analysis because it was not the target group though it was the age group that constitute the highest proportion. The population used for the marital status analysis consisted of 68.6% of the total population, representing the group from which we obtained nuptiality information.

Table 1: Percent distribution of the 2022 Botswana Housing and Population Census

AGE GROUPS	FREQUENCY	PERCENT
0-14	742,539	31.4
15-19	198,569	12.3
20-24	194,132	12.0
25-29	200,235	12.4
30-34	193,247	12.0
35-39	193,190	11.9
40-44	159,893	9.9
45-49	124,728	7.7
50-54	90,458	5.6
55+	262,618	16.2
TOTAL	**1,617,070**	**100**

5.2 Singulate Mean Age at First Marriage

SMAM is the most commonly used measure of the timing and pattern of marriage derived from censuses and surveys. The calculated SMAM for male was 27 years whilst for female was 33 years.

5.3 Proportion of age distribution by marital status

Table 2: shows the proportion of age distribution by marital status

Aggregate data camouflage age patterns and differentials in nuptiality. Nuptiality data by age and sex across all the census show that marriage is almost universal. The proportion married increase with an increase in age for both male and females. **Table 2** indicated that the largest proportion of males' report being currently married aged 55+ years (50.10%) while women 50-54 years had the largest proportion (33.20%). In most cases, the proportion of women married was higher than male across ages 15-44 years, however, the proportion of men married was higher from ages 45-55 years. However, their peak level of current marriage is lower than that for males (50.10% and 33.20%) respectively.

The proportion of not married men is higher from 15 -39 years compared to females. However, the inverse in true for females from those aged 40-55+. Generally, the highest proportion of living together or cohabitating was recorded among males in most age groups except among women aged 15-19 and 20-24 with 5% and 16.35% respectively. Overall, living together declined with age for females. Implicit in these rates is the fact that male tend to remarry soon after marital dissolution, be it as a result of death of a spouse or divorce. (Re-marriage rates cannot be estimated from data). Conclusively, living together is a common phenomenon for males.

Table 2: Age distribution By Marital Status from Population and Housing Census 2022

	MARRIED		NOT MARRIED		LIVING TOGETHER	
AGES	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
15-19	0.02	0.28	96.85	94.72	3.13	5.00
20-24	0.68	2.14	90.13	81.51	9.18	16.35
25-29	2.96	6.72	80.51	71.93	16.53	21.35
30-34	8.22	15.11	70.65	63.1	21.13	21.79
35-39	16.73	23.55	60.83	56.89	22.44	19.55
40-44	25.97	28.85	52.95	54.54	21.08	16.61
45-49	34.56	32.11	46.81	53.6	18.63	14.29
50-54	41.37	33.2	41.68	54.93	16.95	11.87
55+	50.1	27.93	36.83	64.4	13.07	7.68

Nuptiality has changed during the 30-year inter-census period of 2001-2022 the differentials are shown **(Table 3)**. The respondents who reported being married decreased from 27% in 2001 to 20.0% in 2011 while those not married increased from 49.3 % to 57.7 %, respondents living together or cohabiting in 2001 and 2011 declined from 23.7% to 21.5% respectively. Whereas the results in 2022, shows the largest proportion of the respondents were not married (70.9%). Worth noting is the further decline in living together/ cohabitating across the three censuses, 2001 (23.7%) 2011 (21.5%) and 13.4% in 2022.

Table 3: Percent distribution by marital status, census 2001, 2011 and 2022

YEAR	MARRIED	NEVER MARRIED	LIVING TOGETHER
2001	27.0	49.3	23.7
2011	20.8	57.7	21.5
2022	15.8	70.9	13.4

5.4 Differentials in marital status by socioeconomic characteristics

Table 4, provides summarized statistics on the predictor variables. There was a significant association between all the selected socio-demographic characteristics of the study and marital status. To test the association between marital status and the factors influencing it, a chi-square test was performed. The null hypothesis stated that there was no correlation between marital status and the predictor variables, while the alternative hypothesis indicated that there was an association between marital status and each of these factors. The analysis demonstrated that all the predictor variables were associated with the outcome variable, making further analysis possible.

Table 4: Bivariate analysis for Marital Status against Predictor Variables

	CATEGORIES	MARRIED (%)	NOT MARRIED (%)	LIVING TOGETHER (%)	TOTAL NUMBER OF RESPONDENTS	X^2-TEST P-VALUES
Sex	Males	48.98	48.07	49.21	893,733	0.000***
	Females	51.02	51.9 3	50.79	954,244	
Education Level	Primary	20.89	23.84	18.09	372,175	0.000***
	Secondary	39.41	59.24	61.54	917,806	
	Tertiary	39.7	16.2	79.63	339,730	
Employment Status	Formal employment	70.73	33.1	54.7	300,901	0.000***
	Informal employed	29.27	66.9	45.3	490,036	
Religion	Christian	90	86.3	3.4	1,192,865	0.000***
	Muslim	1.2	0.4	0.1	8,003	
	Bahai	0.1	0.02	0.01	387	
	Hindu	0.7	0.66	0.3	3,083	
	No religion	4.0	8.1	0.1	96,452	
	Rastafarian	0.1	0.3	0.03	3,144	
	Other	0.8	0.8	10.0	10,819	
	ATR	3.2	4.0	86.1	60,574	
Place of Residence	Urban	70.4	49.7	44.9	703,470	
	Rural	29.5	31.2	33.9	445,824	
Age	15-17	33.1	36.9	30.0	119,429	0.000***
	18-24	28.8	33.2	38.0	273,272	
	25-34	44.8	22.7	33.0	393,482	
	35-49	29.0	31.0	40.0	323,118	
	50+	36.0	50.0	14.0	51,041	

5.5 Multivariate results

Table 5 presents multinomial logistic regression results. Based on the 2022 Botswana Census data, it appears that females have a higher likelihood of being married compared to males. Specifically, the odds ratio of not being married is 1.524 [CI (1.504; 1.544)] for females in comparison to males. Furthermore, the relative risk ratio of cohabitation versus marriage is 1.517 [CI (1.341; 1.717)] more likely in females than males. Therefore, the census data suggests that males have a lower probability of being married when compared to females.

Level of Education: Individuals with primary education had a 0.394 [(0.386; 0.401)] chance of being unmarried compared to married, but this education level wasn't a deciding factor for unmarried individuals to marry. Those with secondary education had better odds of marriage than those with only primary education, with an odds ratio of 2.03 [(1.64; 2.52)] for the unmarried group. Conversely, those

with secondary education had 2.03 [(1.641; 2.520)] higher odds of cohabitation compared to marriage. This suggests that those with primary education were more likely to be married than the educated group in the cohabiting/living together category.

With regard to age, it seems that individuals between the ages of 15-17 who are unmarried face a higher relative risk ratio than those between the ages of 18-24. This implies that the probability of being married is greater for the latter group. Additionally, those between the ages of 18-24 have a lower relative risk ratio of cohabitation compared to those between the ages of 15-17, which reinforces the notion that individuals in the 18-24 age range are more likely to be married than those in the 15-17 age range.

According to the study, employed individuals have a lower likelihood of being married compared to their unemployed counterparts. The relative risk ratio for being unmarried versus being married is 0.404 (with a confidence interval of 0.399 to 0.410). Moreover, the study found that the relative risk ratio of cohabiting versus being married is 0.743 (with a confidence interval of 0.65 to 0.84) for the employed group, indicating that they are less likely to engage in cohabiting behaviour than the unemployed group.

With respect to religion, Christians are less likely to be married than those who belong to other religions, with odds of 0.72. Additionally, Christians are 3.30 times less likely to live together instead of being married compared to others, with a confidence interval of 2.7 to 4.11, suggesting a higher likelihood of being married for Christians. Furthermore, individuals who identify as Rastafarian or have no religion have higher odds of being unmarried, with odds of 1.28 and 1.32, respectively, compared to those who are married. Muslims and Christians report higher odds of living together instead of being married.

The study revealed that unmarried individuals residing in towns were significantly less likely to be married compared to those living in rural areas, with a probability of 0.752. This finding suggests that people living in rural areas are more likely to be married than those residing in towns. Likewise, the results for those living in Village Urban were consistent with this trend. In addition, the study also found that individuals living in urban areas were 2% more likely to cohabit than to be married, in contrast to their rural counterparts. This indicates that people living in rural areas are more inclined to tie the knot than those residing in urban areas.

Table 5: Multinomial logistic regression models for census 2022

VARIABLES		COEFFICIENTS	P-VALUE	ODDS RATIO(OR)	95% CI INTERVAL
Dependent Variable	Independent Variables				
NOT MARRIED	**SEX**				
	Female	0	0.000***	2	(1.50;1.54)
	Male	REF			
	EDUCATION LEVEL				
	Primary	-0.932	0.000***	0.394	(0.38;0.40)
	Secondary	0.756	0.000***	2..130	(2.09;2.17)
	Tertiary	REF			
	AGE GROUPS				
	15-17yrs	0.274	0.000 ***	0.076	(0.05;0.081)
	18-24 yrs	0.430	0.000***	1.012	(0.321;1.80)
	25-34 yrs	0.036	0.000 ***	0.782	(0.612;0.987)
	35-49 yrs	0.010	0.000***	0.943	(0.023;0968)
	50+	REF			
	EMPLOYMENT STATUS				
	Employed	-0.906	0.000	0.394	(0.38; 0.40)
	Unemployed	REF			
	RELIGION				
	Christian	-0.326	0.000***	0.722	(0.69;0.75)
	Muslim	-1.941	0.000 ***	0.144	(0.13;0.15)
	Bahai	-1.297	0.000 ***	0.273	(0.18;0.40)
	Hindu	-3.208	0.000 ***	0.040	(0.03;0.48)
	No religion	-0.253	0.000***	1.289	(1.23;1.35)
	Rastafarian	-0.279	0.000 ***	1.322	(1.10;1.60)
	ATR	-0.228	0.000***	0.796	(0.73;0.86)
	Other	REF			
	PLACE OF RESIDENCE				
	Town	-0.286	0.000 ***	2.033	(0.737;0.767)
	Village-Urban	-0.203	0.000***	1.357	(0.804;0.828)
	Rural	REF			

Table 5 CONT'D: Multinomial logistic regression models for census 2022

VARIABLES		COEFFICIENTS	P-VALUE	ODDS RATIO(OR)	95% CI INTERVAL
Dependent Variable	Independent Variables				
COHABITING /LIVING TOGETHER	SEX				
	Female	0.417	0.00***	0.517	(1.34;1.72)
	Male	REF			
	EDUCATION LEVEL				
	Primary	0.710	0.000***	2.033	(1.641;2.520)
	Secondary	0.305	0.000***	1.357	(1.095;1.682)
	Tertiary	REF			
	AGE GROUPS				
	15-17yrs	0.274	0.000***	0.213	(0.01;0.356)
	18-24 yrs	0.009	0.000***	1.330	(1.24;2.10)
	25-34 yrs	0.036	0.000***	0.852	(0.423;0.901)
	35-49 yrs	0.010	0.000***	0.790	(0.610;0.82)
	50+	REF			
	EMPLOYMENT STATUS				
	Employed	-0.296	0.000***	0.743	(0.655;0.844)
	Unemployed	REF			
	RELIGION				
	Christian	-431.68	0.000***	3.3	(2.7;4.11)
	Muslim	-433.50	0.000***	5.41	(1.25;2.32)
	Bahai	-433.412	0.000***	5.90	(1.14;3.07)
	Hindu	-435.03	0.000***	1.16	(6.12;2.21)
	No religion	-431.596	0.000***	3.63	(2.64;4.99)
	Rastafarian	-431.584	0.000***	3.68	(7.24;1.86)
	ATR	-432.245	0.000***	1.89	(7.59;4.75)
	Other	REF			
	PLACE OF RESIDENCE:				
	Town	-0.490	0.000***	0.613	(0.50;0.75)
	Village-Urban	-0.596	0.000***	0.551	(0.48;0.63)
	Rural	REF			

6. DISCUSSION

The study aimed at examining factors that influence nuptiality levels and trends in Botswana utilising the current 2022 Population and Housing Census. The findings suggest that the timing of marriage was changing in Botswana. Surprisingly, the SMAM estimates revealed that generally the mean age at marriage was higher among females than males. The recent rise in women's age at first marriage could be explained as part of the wider change in socio-cultural perspective with regard to family institutions, individualization, intergenerational relationships and women's empowerment. This supported by a number of previous researchers (Lesthaeghe, Kaufmann, and Meekers 1989; Mason 1993; Hertrich and Locoh 1999; Thiriat 2000). Other explanation could be the weakening of family control over marriage and a greater involvement of young women in the choice of spouse might explain this increased mean at age for women.

The trend analysis results showed that the proportion of never married increased across all the three censuses (2001, 2011 and 2022). Then growing of incidence of single hood is similar with previous studies (Situmorang, 2000, Fry and Parker, 2021). Parker's study attribute this to a rise in the share of cohabiting but has not off the drop-in marriage hence the overall decline in partnering. However, being unpartnered adults have negative implications on average earnings than partnered and lower educational attainment and are more likely to be living with parents. According to the same study, married and cohabiting adults are economically better off than those unpartnered.

The study showed that females have a higher likelihood of being married compared to males. Furthermore, the relative risk ratio of cohabitation versus marriage was less likely in females than males. Therefore, the census data suggests that males have a lower probability of being married when compared to females. This could be as a result of marriage squeeze; and marriage squeeze referring to an oversupply of women against a limited supply of men as potential spouses resulting in high demand for men who are most likely to be married than their women female counterparts' women (Wilson, 1987; Spanier and Glick, 1980; Brien, 1990; Akers, 1967). This disproportion between the sexes at prime ages of marriage could be explained by the fact that females constituted the highest proportion of the actual population count in all the five censuses from the 1971 census to the 2011 census (Statistics Botswana, 2012).

Secondly, the argument could be explained by the rise in women female educational attainment as a function of their increasing years of schooling; women's female participation in the labour market which increases their economic independence and the marriage squeeze on women (Haya Stier and Yossi Shavit, 1994; Stevenson & Wolfers, 2007; Becker, 1973), ideological reasons and legal reforms. This is inconsistent with the theoretical expectation regarding Becker's economic theory of the family, which posits that gender role specialization within the family motivates for marriage wherein the husband specializes in the labour market while the wife specializes in homemaking (Becker, 1973). However, in 2022, the results indicated that males were more likely to be living together/ cohabiting than being married. This could be explained by social expectations which do not condone cohabiting of males compared with women. And women during the census could have lied about their cohabiting status to conform to societal expectations.

The study further revealed that individuals with primary education had chance of being unmarried compared to married. Those with secondary education had better odds of marriage than those with only primary education. Similarly, Carter and Glick (1970) as reported by cited by Hogan (1978), regarding socioeconomic differentials in marriage have found school drop outs especially among men were had poorer marriage prospects. In the context of Botswana, perhaps females also fail to attract prospective marriage partners if they are not also educated. Thus, economic barriers theoretically influence the marriage rates for both females and males because financial stability as a prerequisite for marriage. In the same study, respondents with primary and secondary education had a higher odd of cohabitation than being married. The finding points to the fact that marriage is an expensive venture and adequate resources are often needed to conduct the marriage ceremony and the associated familial obligations in the African marriage setting. Those with tertiary education might find marriage as a liability than an assert. In 2022, the findings showed the log-odds of living together/ cohabiting was higher among those

respondents with secondary education compared with those with primary education. The results concurred with previous studies which indicated that cohabitation increased in Botswana from 1991 to 2011 among males and females (Statistics Botswana [SB], 2016). These results could have been attributed to change in traditional customs, values, and beliefs that promotes universal marriage.

The findings with regard to residence status showed that the log-odds of being married were lower in the urban areas compared with the rural areas. This could suggest a change of attitudes towards marriage in the urban centres, wherein individuals freely choose other alternatives such as cohabitation over marriage. Secondly, in urban centres, the weakening of custom social values that regulate behaviour is weaker than in rural areas hence facilitates individuals' freedom of choice away from the traditional institution of marriage. The evidence is further supported by Hogan (1978) in his study of the effects of demographic factors, family background, and early job achievement on marital status. Likewise, the results for those living in Village Urban were consistent with this trend. In addition, the study also found that individuals living in urban areas were 2% more likely to cohabit than to be married, in contrast to their rural counterparts. This indicates that people living in rural areas are more inclined to tie the knot than those residing in urban areas. This could be explained by the low cost of living in rural areas thus couples can afford to marry.

The findings with regard to age shows that individuals between the ages of 15-17 were less likely to be unmarried than 18-24. This implies that the probability of being married is greater for the latter group. Additionally, those between the ages of 18-24 have a lower relative risk ratio of cohabitation compared to those between the ages of 15-17, which reinforces the notion that individuals in the 18-24 age range are more likely to be married than those in the 15-17 age range. The results resonate with the legal framework in the country regarding the age of majority which 18 years is being the marriageable age. It indicates that the practice of underage marriages is probably insignificant in the country. Increased odds of living together among this cohort can be explained by the freedom from parental control. This could be explained by the latter age being now in tertiary institutions and parental control does not exist. Naturally, they broke free from parental control and gained personal freedom and independence. This coupled with more relaxed values and customs in tertiary institutions increasingly increased their chances of choosing to enter into living together arrangements.

The logistic regression results also revealed that the odds of an individual being Christian were less likely to be married than those who belong to other religions. Additionally, Christians were three times less likely to live together instead of being married compared to others, suggesting a higher likelihood of being married for Christians. Religious differences in the odds of being in the married category perhaps reflects differing norms and beliefs that may affect one's orientation toward marriage. Furthermore, individuals who identify as Rastafarian or have no religion have higher odds of being unmarried, compared to those who are married. Muslims and Christians report higher odds of living together instead of being married. The study further revealed that those who belonged to No Religion were more likely to be living together as well as not married compared to be married. The finding points to the fact that religion usually put stringent measures/doctrines which are against living together.

7. IMPLICATIONS OF RESEARCH

The implications of this research are based on two main areas of responding to societal needs and advancing academic research. The study is critical as it falls within the University of Botswana priority research area of Social and Political Development. Further, the study will contribute to the achievement of the National Vision 2036, Pillar 2 being Human and Social Development which envisages a Strong Family Institution. The Vision prioritizes promotion of the marriage institution in which parents will play a key role in their children's upbringing facilitated by a strong traditional value system. The Vision upholds the family as a foundation of society which requires to be strengthened to become strong national building blocks (Office of the President: 2015). In the same vein, the National Development Plan 11, Chapter 2.6 on Population and Development underscores the commitment of Botswana to promoting the marriage institution as well as strengthening contribution of the family in the provision of social support and protection. (Ministry of Finance and Development Planning: 2015). In this regard, the research findings will indicate what is obtaining on the ground and offer findings and recommendations that will facilitate policy makers to undertake evidence based decision making on programming regarding promotion of nuptiality, strengthening of the family unit as a basic socialization vehicle for morally upright children; building and promotion of peace and

stability within marriages and within other forms of partnerships such as cohabitation in order to achieve social protection and cohesion for Batswana. Furthermore, the foregoing policy pronouncements by Government coincides with a research gap identified by Mokomane (2014) of the need to undertake comprehensive research on the changing marriage institution and the societal implications thereof; not only for academic interests and also to guide the formulation and improvement of policies and programmes in order to enhance the socio-economic welfare of families, especially those with children

8. CONCLUSION

Despite the constraints stated, the findings help in pointing out the marriage dynamics within Botswana context and further buttress the known theoretical perspective in Africa. In addition, the study made use of census data which is usually underutilized yet it can be used in policy formulation in developing countries.

9. LIMITATIONS OF THE STUDY

The findings from this study should be viewed within the context of the following limitations. Data on marital status was based on self-reported information. Therefore, some respondents could have lied about their marital status to conform to societal expectations.

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MARRIAGE PATTERNS, LEVELS AND TRENDS IN BOTSWANA

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EXECUTIVE SUMMARY

Marriage and nuptiality play crucial roles in understanding demographic shifts and societal dynamics across disciplines like demography, sociology, and economics. This study aimed to analyze marital status and types of union among individuals aged 10 and above in Botswana, examining patterns, levels, and trends.

Based on data from the 2022 Population and Housing Census, collected through three face-to-face questionnaires, descriptive analysis including cross-tabulation was conducted. This approach allowed exploration of marital status about variables such as sex, age, religion, and place of residence, highlighting proportions within each category.

Key findings indicate declining marriage rates over time, accompanied by an increase in the proportion of never-married individuals. Cohabitation rates, initially rising, showed a decline from 2011 to 2022. Marriage rates correlate positively with age, with a corresponding decline in the proportion of unmarried individuals as age increases. Notably, cohabitation is prevalent among males aged 25–59 and females aged 20–49. There was a variation of marriage rates by district, with urban towns portraying the highest rates.

Median age at marriage is higher for males (31 years) compared to females (26 years), with no notable gender differences across places of residence. The study also reveals higher proportions of child marriages among females (2.64%) than males (0.58%), and a higher marriage rate among individuals with other religious affiliations compared to Christians or practitioners of African Traditional religions.

In summary, the study underscores the need for comprehensive strategies to address declining marriage rates and eradicate child marriage in Botswana. Recommendations include aligning national policies with societal realities, enhancing enforcement mechanisms, raising awareness, and fostering stakeholder collaboration to safeguard marriage as an institution and promote the well-being of vulnerable populations.

1. INTRODUCTION

1.1 Context of marriage in Botswana

Nuptiality, incorporating marriage, divorce, and union formation serves as a crucial indicator of societal dynamics. In Botswana, the study of nuptiality reflects a multidimensional interplay of socio-cultural, political, economic, and demographic factors (Kubanji, 2014). Traditional cultural values intertwine with modern influences like urbanization and globalization, shaping attitudes and behaviours, particularly among younger generations. Botswana's stable political landscape, characterized by democratic governance, influences marriage patterns through policies promoting social development and gender equality (Central Statistics Office, 2009). Economic factors, such as employment opportunities and income levels, significantly impact individuals' marriage decisions, with economic stability often deemed essential for family formation.

Moreover, Botswana's demographic characteristics, including its youthful population and high fertility rates, intersect with marriage patterns (Letamo et al., 2015). Evolving population policies aim to address socio-economic disparities and promote sustainable development, recognizing the decline in traditional marriages and the emergence of new family structures. These national policy instrument objectives of strengthening marital institutions are also enshrined in regional and global instruments like Africa's Agenda 2063 and SDG 5.

This chapter aims to estimate nuptiality levels, trends, and patterns in Botswana utilizing data from the 2022 Population and Housing Census and previous census data. The findings will assist in assessing progress toward Vision 2036 and the Revised National Population Policy goals of promoting marriage and Sustainable Development Goal targets, such as eliminating harmful practices like early and forced marriage. Through this analysis, policymakers, researchers, and stakeholders can devise strategies to bolster healthy, equitable, and resilient marital relationships and family systems within Botswana's evolving society.

1.2 Objectives of the analysis

The objectives of this current research were to:

- Analyse the distribution of the population aged 10 and above according to their marital status and type of union by sex, age, district, and place of residence; and
- Analyse patterns, levels, and trends in marriage

2. LITERATURE REVIEW

2.1 State of Research on Marriage in Botswana

Marital status and nuptiality are pivotal for comprehending demographic shifts and societal dynamics across disciplines, including demography, economics, sociology, and anthropology (Budlender, Chobokoane, & Simelane, 2004; Newell, 1988). In Botswana, these trends bear significant implications for family formation and stability.

Over the past four decades, census data spanning from 1971 to 2011 reveals a noteworthy decline in marriage rates and a concurrent rise in cohabitation, alongside increased instances of divorce (Gaisie, 1995; Mookodi, 2004). These transformative shifts are attributed to a complex interplay of socio-economic factors and the profound impact of HIV/AIDS (Dintwa, 2010). Traditional practices such as polygyny have

In the cultural context of Botswana, motherhood holds significant value, yet there's a noticeable normalization of premarital childbearing (Ellece, 2012; Pitso, 2003). Moreover, the escalating divorce rates reflect evolving societal attitudes, often influenced by factors such as adultery, violence, and broader cultural shifts (Seitshiro, 2010; Shabani, 2013). Cohabitation is increasingly perceived as a precursor to marriage, indicating a shifting paradigm in relationship dynamics (Mokomane, 2005, 2006).

The Revised National Population Policy of Botswana underlines the paramount importance of understanding nuptiality patterns (Central Statistics Office, 2009). Rebecca Kubanji's comprehensive analysis of the 2011 census data underscores significant shifts in marital status, revealing a notable increase in the number of unmarried individuals and a rise in cohabitation rates, particularly among older males (Kubanji, 2014). Such findings underscore the urgent need for the development of a comprehensive family policy framework aimed at preserving familial integrity and re-evaluating the definitions of marital status to align with contemporary socio-cultural realities (Shabani, 2013).

Furthermore, Letamo, Bainame, and Bowelo advocate for an in-depth exploration of cohabitation and premarital childbearing, emphasizing the importance of evidence-based policy interventions to support affected families (Letamo et al., 2015). Addressing these shifting trends is vital for maintaining fertility rates in Botswana, aligning with the objectives outlined in the Revised National Population Policy.

The World Report Statistics report of 2022 put Botswana as number 1 country in the world with the highest rate cases at 92.93 over 1000 people. Maytham, (2020) reflected that the prevalence of GBV in Botswana was cited as 67%. Botswana's major concern with addressing SGD 5 on gender equality is GBV. The government is working tirelessly to implement the Convention on Elimination of All Forms of Discrimination against Women (CEDAW). However, the statistics on the ground however proof otherwise. The proportion of women holding parliamentary seats declined from 17% in 2000 to 9.5% in 2018, yet another evidence of gender inequality (Maytham (2020). Once gender inequality is eliminated, the country can achieve the RNPP goal of promoting the institution of marriage and strengthening the role of the family in providing protection and social support. Strengthening marriages provided the hope for attaining social, economic, political, cultural, and legal development for both men and women, as aspired in Botswana's Policy on Gender and Development of 2015.

Government policy interventions are in place to counter these challenges meted against women; however, their implementation is not reaping the desired effect. It is therefore incumbent to also investigate indigenous knowledge systems to solve these problems, as some of them are entrenched within the cultural fabric.

In September 2020, President Mokgweetsi Masisi amended the 2015 Land Policy to give married women in Botswana the right to own land. Previously, married women were only eligible if their husbands did not own land (Maytham, 2020). More of such amendments are commendable.

Women in Botswana are subjected to poverty, while the majority of the households are headed by women. The combination of these makes them susceptible to low income and dependence on men for a living, which in turn is a bedrock for GBV. Tumani and Modie-Moroka (2023) observe that these vulnerabilities subject women to multiple traumas. The authors advocate for a family policy that can specifically focus on poverty reduction and income maintenance, direct compensation for the financial cost of raising children among low-income mothers, among others.

Contrary to the above information, recent data from Statistics Botswana indicates a notable increase in the number of marriages in Botswana (Vital Statistics Report, 2021). However, it is noteworthy that the median age at first marriage remains relatively high, suggesting potential shifts in societal norms regarding marriage timing and dynamics. These emerging trends warrant further investigation to comprehend their implications for demographic dynamics and societal structures in Botswana. The analysis of the 2022 PHC provides data to update progress or lack thereof, regarding the evolution and changing patterns of marriage which has implications for socioeconomic and demographic outcomes such as fertility. The study also aims to provide evidence regarding the percentage of the population in various marital statuses such as married, never married, cohabitation, and so forth which is critical for informing policy decisions. The problem is that currently, only outdated data exists on marriage and therefore cannot inform policy and/or programme interventions without the analysis of the 2022 PHC data, hence the importance of the current analysis.

2.1 Theoretical Framework

Social Exchange Theory proposes that social behaviour is the result of an exchange process, the purpose of which is to maximize benefits and minimize costs (Rao, 2024). According to this theory, people weigh the potential benefits and risks of their social relationships. When the risks outweigh the benefits or rewards, they will terminate the relationship. Since social exchange theory is based on give and take, if this back-and-forth exchange is not considered equitable, it can affect the health of the relationship. Therefore, individuals are motivated to enter a relationship for the benefits they perceive to obtain and the costs they will incur (Nakonezny, P., & Denton, W., 2008). The Theory argues that although individuals are constrained by role expectations, they act in their role to maximize benefits and reduce costs to themselves. The Social Exchange Theory can be applied to this study to predict whether couples in a relationship will decide to turn it into marriage which is more stable or not. The theory argues that the equity of the exchanges made in the relationship would be the reason the marriage was successful over time. Social Exchange Theory can be used to explain why couples marry, divorce, have children, and live together without necessarily getting married.

3. METHODOLOGY

3.1 Research design

The current study is based on data collected cross-sectionally through a population census, which is a complete count of all the people in Botswana.

3.2 Data collection methods

The 2022 Population and Housing Census data were collected using three face-to-face questionnaires. One of the questionnaires was the household questionnaire which was designed to collect data from households. Another questionnaire was the institutional questionnaire which consisted of two types (i). Institutional questionnaire designed for tertiary students living away from their parental homes while attending college or university; the homeless, army staying in army barracks; and mine workers staying in mine hostels, and (ii) hotel institutional questionnaire which covered patients in hospitals, persons staying in hotels, lodges, safari camps, and prisoners. It should be noted that the institutional questionnaire was a shorter version of the household questionnaire. After data collection, the data were merged by Statistics Botswana to create a single data file which was used for data analysis.

3.3 Measurement of variables

The dependent variable in this study is marital status and all other variables (sex, age, education, religion, place of residence) are independent variables.

Marital status: Marital status was measured by the following categories: married, never married; living together; separated, divorced, widowed; divorced but now living together; and widowed but now living together. Because of few cases in some categories, particularly for cross-tabulation, a decision was taken to recode it into the following broad categories: married; never married; living together (living together, divorced but now living together, and widowed but now living together); and formerly married (separated, divorced, and widowed).

3.4 Data analysis methods

Descriptive analysis using cross-tabulation for the marital status component. The variable on marital status was cross tabulated with other analytical variables, thus providing the proportions of people accounting for each marital status. SPSS Version 26 was used to analyse the data.

4. FINDINGS AND DISCCUSIONS

Marriage was analysed using four key categories, married, never married, living together and formerly married (separated, divorced, and widowed combined because of the small sample size in these categories for cross-tabulations). The following sub-sections analyse marital status by sex, age, religion, and place of residence.

4.1 Marital status by various variables

4.1.1 Marital status by sex

Table 1 below presents the distribution of the population aged 10 years and over as the question of marital status was posed to this group. The largest proportion of the population aged 10 years and over is in the never-married category, followed by those who reported they were married. It is also clear from this table that few numbers are recorded in the separated, divorced, and widowed categories and therefore further analysis combines these categories. It should be noted that a significantly higher proportion of males are in the never-married category compared to females, while the proportion married is almost equal for both sexes. The higher proportion of the male population in the never-married married compared to females could reflect the late age at first marriage among men. The high proportion who was widowed is indicative of the fact that men tend to marry younger women and therefore are more likely to die earlier, leaving women as widows. Furthermore, the low proportion of men who report being widowed could be indicative of the high likelihood of men remarrying.

Table 1: Marital status of the population aged 10 years and over by sex (%)

	MALE		FEMALE		TOTAL	
MARITAL STATUS	NUMBER	%	NUMBER	%	NUMBER	%
Married	142,776	16.7	148,707	16.2	**291,483**	16.5
Never married	615,169	72	632,269	69.1	**1,247,436**	70.5
Living together	82,103	9.6	86,682	9.5	**168,735**	9.5
Separated	1,182	0.1	1,802	0.2	**2,984**	0.2
Divorced	6,368	0.7	11,097	1.2	**17,465**	1
Widowed	6,794	0.8	35,002	3.8	**41,796**	2.4
Widowed	6,794	0	35,002	4	**41,796**	2

Source: 2022 PHC

4.1.2 Marital status by age

Because marriage is associated with an individual's age, marital status varies with age. Generally, the proportion of the population that marries increases with age, from 12.5% among 30–34-year-olds to 40.7% among those aged 65-59 years **(Refer to Table 2)**. Widowhood increases with age, much faster among women than among men.

In 2011, there were increases in the proportions living together from preteen years for both females and males. However, decreases are noted from ages 35-39 for males, while for females it is from 30 – 34 years. Comparatively in 2022, increases in the proportions living together were noted from 15 – 19 to 35 – 39 years for males, while for females it was from 15 – 19 to 30-34. This implies that males graduated out of the 'living together' status earlier in age than their female counterparts.

In 2011, increases in proportions married were noted from pre-teen years up to 65+, while for females it was up to 55 – 59 years. On the one hand, in 2022 increasing proportions were noted from 20-24 to 75 – 79 years, among males, while for females it was from 15 – 19 up to 55 – 59 years. **(Refer to Table 2 &3)**.

For the separated/divorced in 2011, females experienced increases in proportions up to 25 - 29 years, while for males, increases ran from 15 – 19 all the way up to 60 – 64 years. Decreases in proportions among males who are separated/divorced were only experienced in advanced ages of 65 +. Comparatively, in 2022 for males, incremental increases were noted from ages 30 – 34 up to 70 – 74 years. For the divorced, increases ran from 25 – 29 to 65 – 69 years. On the one hand, for the separated/divorced females, increases were experienced from 25 – 29 to 65 – 69 years. Nonetheless, for the separated, declines were experienced at 70 – 74 years, while for the divorced, declines were from 65 to 69 years **(Refer to Tables 2 &3).**

This implies that males experienced marriage up to advanced ages than females during the 10 years. The question remains as to what order of marriages these are for men.

4.1.3 Marital Status by District

The population reporting being married is higher in Orapa (35.1%), followed by Jwaneng (24.5%) and Sowa (23.8%). Conversely, Ngwaketse West and Ngamiland West had the least number of married couples at 9.6%, respectively, followed by Delta (10.5%) and Ghanzi (10.8%). For the never-married population, Ngwaketse West had the highest proportion of people who have never married (77.8%), followed by Central Serowe (75.1%) and Central Mahalapye (74.3%). CKGR had the lowest proportion of never-married individuals at 56.6%, followed by Orapa at 58.2% and Jwaneng at 61.7%. CKGR had the highest proportion of people living together (29.1%), followed by Delta (20.8%) and Ghanzi (19.5%). Conversely, Orapa had the lowest proportion of couples living together at 4.0%, followed by Kweneng East (6.2%) and Kgatleng Wards (6.7%). The highest proportion of separated couples was in CKGR (0.5%), followed by North East, Ngamiland West, and Ghanzi (each at 0.3%). Orapa, Southern, and Central Serowe had the least proportion of separated cases at 0.1% each. Orapa had the highest proportion of divorce cases at 1.8%, followed by Gaborone (1.4%), and Jwaneng and North West (each at 1.3%). CKGR had the least proportion of divorce cases at 0%, followed by Ngwaketse West (0.4%) and Ngamiland West (0.5%). Widowhood is more prevalent in the North East (4.2%), followed by Bobonong (3.7%) and Barolong (3.6%). Sowa and Orapa had the lowest proportion of widowhood at 0.6%, followed by Jwaneng (0.8%), and Delta and Ngwaketse West (1.3%). Regarding those divorced but now living together, Sowa and Selibe-Phikwe had the highest proportion at 0.2%, followed by Ghanzi and Gaborone at 0.1% each. CKGR reported no cases of individuals who divorced but now living together. **(Refer to Appendix 4).**

4.1.2.1 Age at first marriage

Examining the age of marriage as the central point directs our gaze towards postponing marriages as a remedy, veiling the fundamental issue of early marriage, which stems from gender inequality. Two indicators that measure age at first marriage that are used in this study are median age at first marriage and percent married before age 18 years.

4.1.2.1 Median age at first marriage

The median is measured by linearly interpolating between the age values by which 50 percent or more of the women (or men) were first married or lived in consensual union. (MACRO/DHS, 2011; Croft et al., 2018). In addition, the singulate mean at marriage is used as an important indicator in nuptiality analysis.

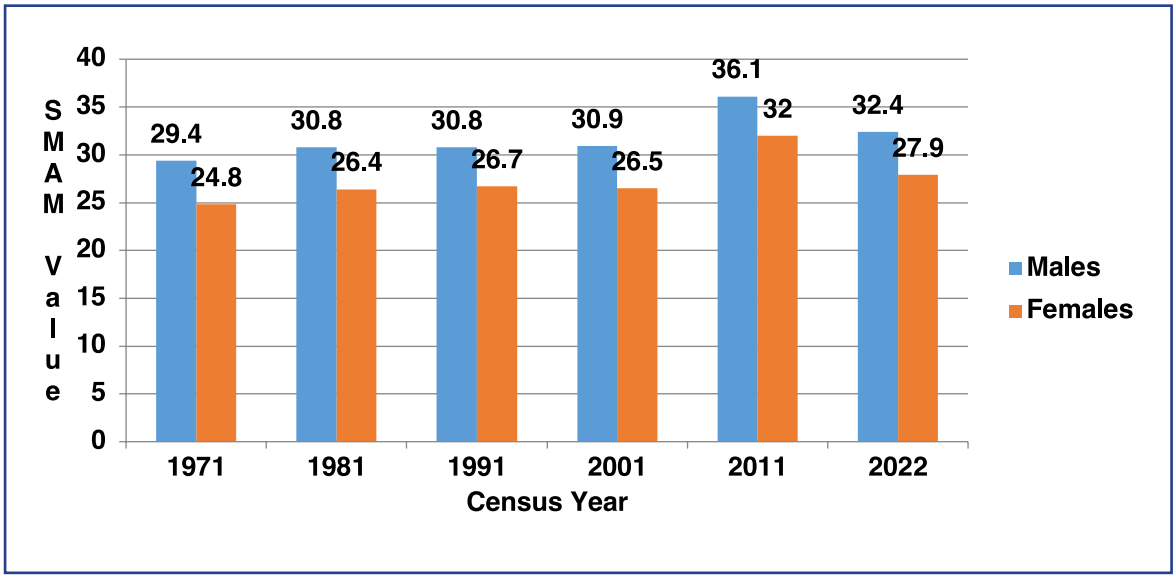
The median age for first marriage was calculated to be 29 years, with men typically marrying at 31 years and women at 26 years **(Refer to Table 2)**. Across the board, males consistently exhibit a greater median age at first marriage than females.

Table 2: Median age at first marriage or union by selected socio-economic characteristics

VARIABLE	MALE	FEMALE	TOTAL
TOTAL	**31**	**26**	**29**
Place of Residence			
Towns	31	26	29
Urban Villages	32	26	29
Rural Areas	31	25	28
Marital Status of the mother			
Married	33	28	30
Living Together	28	24	26
Formerly Married	31	24	25
Religious Affiliation			
Christianity	32	26	29
African Traditional	31	24	29
No religion	31	24	29
Other	28	23	26

Source: 2022 PHC

FIGURE 1: Singulate Mean Age at Marriage in Years by Sex: 1971-2022



Source: CSO, 1995; Mukamaambo; 95; www.chartsbin.com; Statistics Botswana 2014; Kubanji: 228; 2022 PHC

4.1.2.2 Singulate Mean at Marriage

Another significant indicator for marriage is the singulate mean at marriage (SMAM), which indicates the average duration of singleness among those who marry by age 50. The overall pattern suggests a rise in SMAM for both genders until 2011, followed by a subsequent decrease, notably more pronounced among females (Refer to Figure 1).

4.1.2.3 Child marriages

Child marriage is "any marriage or union where at least one of the parties is under 18 years old" (UNICEF, 2022). One of the key areas to be investigated was the prevalence of child marriages in Botswana. The following legal instruments forbid child marriages: the Marriage Act of 2022 Section 15 and the Children's

Act of 2010 forbid the marriage of any person under the age of 18 years. The Penal Code prohibits sexual intercourse with girls under the age of 16 years. Despite these prohibitions, there are police reports and other studies that report the practice of child marriages and child sexual abuse in some areas of Botswana. The proportion of women (or men) aged 20-24 years who were married or in a union before age 15 and before age 18 is a Sustainable Development Goals (SDG) Indicator for monitoring progress toward ending child, early, and forced marriage **(SDG Indicator 5.3.1)**.

The 2022 PHC asked the question on the age at first marriage/union. The inclusion of that variable enabled the researcher to estimate the percentage of women aged 20-24 years old who were married at or in a union before age 18. There are two reasons for using women 20-24-year-olds who first married or entered a union before age 18. The first reason is that the percentage of girls aged 15-19 who are married or in a union at any given time includes girls who are 18 and 19 years old and no longer children, according to the internationally accepted definition of a child. Secondly, the indicator includes girls aged 15, 16, and 17 who are classified as single, but who could eventually marry or enter a union before the age of 18. Using women aged 20-24 avoids the above limitations and so more accurately approximates the real extent of child marriages.

The prevalence of child marriage is calculated as the number of women (or men) aged 20-24 who indicated that they were married or in union before age 18 divided by the total number of women (or men) aged 20-24 years. The analysis relied on a direct question on age at first marriage: "How old was…. when he/she first got married or in union?"

Child marriage = Number of women (or men) aged 20-24 who were married or in union before age 18 / Total number of women (or men) aged 20-24 years.

The table provided illustrates that in 2022, out of a total of 3,166 child marriages, a greater proportion involved females than males, with 2,609 and 557 respectively. Most of these child marriages were predominantly between individuals who were cohabiting, regardless of gender **(Refer to Tale 3).**

Table 3: Total number of women and men 20 - 24 who married before age 18

MARITAL STATUS	MALE	FEMALE	TOTAL
Married	32	325	**357**
Living together	525	2,284	**2,809**
TOTAL	**557**	**2,609**	**3,166**

The table below indicates that child marriages comprised 1.63%, with a larger proportion involving females than males, 2.64% and 0.58%, respectively. These statistics demonstrate that child marriages are more prevalent among females than males **(Refer to Table 4).**

Table 4: Percentage of women and men aged 20-24 who married before age 18

MARITAL STATUS	MALE	FEMALE	TOTAL
Married/Living together	(557/95,239) = 0.58	(2609/98,893) = 2.64	(3166/194,132) = 1.63

Source: 2022 PHC

It should be noted that child marriage is a violation of human rights. UNFPA (2022) report states that child marriage threatens girls' lives and health, and it limits their prospects. Girls pressed into child marriage often become pregnant while still adolescents, increasing the risk of complications in pregnancy or childbirth. These complications are the leading cause of death among older adolescent girls.

4.1.3 Marital Status by Education

The current analysis points to the need for interventions that can make marriage desirable and sustainable.

Higher proportions of those single and married were found among secondary, primary and degree holders respectively **(Refer to Table 8).**

Cohabiting relationships were more common among those with secondary, primary, degree and diploma holders. Similarly, for the separated/divorced, prevalent rates were high among those with secondary, primary, degree and diploma education respectively. Widowhood was more prevalent among those with primary and secondary education (54.9 versus 22.2%). A new status 'Widowed/Divorced now but living together' was more prevalent among those with secondary and primary school education. **(Refer to Table 8)**

4.1.4 Marital status by residence and religion

The population reporting being married is higher in towns/cities than in rural areas while the opposite is true of the proportion never married. However, widowhood is more prevalent in rural areas than in towns/cities, probably indicating that as people retire, they tend to go to rural areas such as cattle posts and lands.

Populations belonging to other religions showed a higher propensity to marry compared to other religious groups, followed by Christians and then African traditional religions. A higher proportion of people with no religious affiliation reported never marrying compared to other groups. For example, 75.5% of people with no religion reported never married compared to 68.4% of Christians **(Refer to Table 9).**

4.2. Levels and trends in marriage

Between 1971 and 2022, the proportion of the population married declined substantially, while the proportion of never marrying increased during the same period. The proportion of those living together also rose from 12.2% in 1991, when the status was introduced, however dropped between 2011 and 2022. The proportion of the widowed population has generally been on a decline since 1971. **(Refer to Table 5).**

Table 5: Percentage Distribution of Population of Marital Status by Sex, 1971 - 2022

	1971		1981		1991		2001		2011		2022	
MARITAL STATUS	M	F	M	F	M	F	M	F	M	F	M	F
Never Married	44.0	37.0	51.7	44.5	54.8	49.5	51.7	46.5	58.1	53.4	68.8	66.3
Married	47.1	42.9	44.4	41.5	29.0	27.2	17.1	17.9	18.8	17.9	16.0	15.6
Living Together	n/a	n/a	n/a	n/a	12.2	12.0	16.8	17.1	20.6	20.7	9.0	8.9
Separated/Divorced	5.0	6.6	2.1	3.3	1.7	2.0	1.2	1.8	1.1	1.7	0.4	0.7
Widowed	2.1	11.9	1.8	11.0	1.5	8.5	1.3	6.5	1.3	6.2	0.8	3.7
Divorced but now living together	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.1	0.1
Widowed but now living together	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.1	0.1

Source: Statistics Botswana, 2014 (Kubanji; 227), 2022 PHC

4.2.1. Trends in the never married population

The proportion of the single population has been growing over the years. Males had higher proportions than females, for those who never married, from 1971 to 2022. Higher increases in singleness for both males and females were experienced between 2011 and 2022 (10.7% for males and 12.9% for females). These compare with percentage increases of 6.4% among males and 8.6% between 2001 and 2011.

4.2.2 Trends in the married population

The proportion of married males declined consistently over the censal years (1971 to 2022). However, for females, the pattern was like that of males up to 1991. Between 2001 and 2011, there was no increase in the proportion of married among females, while between 2011 and 2022, there was a decline from 17.9% to 15.6% **(Table 10)**

4.2.3 Trends in the living together population

There has been an increase in the proportions reporting to be living together ever since 2001 when the status was first introduced. This trend was maintained up to 2011. A drastic decline was noted between 2011 and 2022 (20.6% to 9.0% for males and 20.8% to 8.9% for females).

4.2.4 Trends in the separated/divorced/widowed

Drastic declines in the proportions of separated, divorced, and widowed have been experienced over the years.

4.2.5 Divorced/widowed but living together

A new status divorced but now living together has been noted for the first time during the 2022 census. Lower proportions were noted among both males and females. However, it needs to be monitored.

The decline in marriage is probably indicative of the declining significance of marriage as an institution in Botswana. With the increased female educational attainment, increased involvement of females in the labour force, and increased empowerment of females, marriage has lost the significance of economic benefit that women used to derive from it when they were less empowered. As social exchange theory puts it, the benefits of being married are outweighed by the cost of marriage.

5. POLICY IMPLICATIONS

The declining marriage rates in Botswana's population undermines the aspiration of the Revised National Population Policy of Botswana which espouses promoting the institution of marriage. It is apparent from the evidence presented in this paper that marriage rates are declining while the proportion of the population reporting never marrying is on the rise. It is imperative therefore that appropriate and effective strategies be designed and implemented to protect the disappearance of the institution of marriage.

Since many international agreements and national legal instruments outlaw child marriage, including the Convention on the Rights of the Child and the Convention on the Elimination of all Forms of Discrimination against Women, every effort must be made to eliminate the existence of child marriage in Botswana. The International Conference on Population and Development in 1994 also called on countries to eliminate child marriage (UNFPA, 2022). The 2022 PHC data reveal the existence of child marriage (1.62%) despite the promulgation of numerous laws prohibiting such a practice in the country.
Vision 2036 underscores the promotion of the institution of marriage where parents are actively involved in the raising of children, this is indicative of the value of a strong family foundation, which is a building block for stable marriages. However, the results of this analysis and past censal trends show that males spent more years single than females. This, coupled with the fact that Botswana is characterised by high proportions of non- marital childbearing, leaves a lot to be desired. If most children are raised out of wedlock, marriage may in turn be less desirable for them, and could mean creation of future cohorts characterised by unstable marital and family unions.

The vision 2036 aspiration of building strong marriage foundation resonates with the aspirations of Africa's Agenda 2063. The results of the current analysis indicate that child marriages are more prevalent among females than males. These should cease, to attain Agenda 2036's target for ending all harmful social norms and customary practices. Furthermore, these practices set precedence for GBV among women and girls.

The trends for the past 6 censuses show an increase in the proportions living together and a decrease in the proportions married. Additionally, a new marital status 'Divorced/Widowed but Living Together', although with insignificant proportions, was recorded in 2022. This category needs monitoring going forward, as it is bringing a new landscape to the marital institution in Botswana. John and Nitsche (2022) argue that union dissolution and remarriage are common in Sub-Saharan Africa. They however allude to the need to equally examine other important aspects like a) the timing of the first union dissolution, and b) the time women spend outside marriage due to union dissolution and time spent in remarriage. This points to further research that can test the applicability of the social exchange theory within the context of marital unions in Botswana.

Botswana, Africa, and the world have visionary aspirations to create safe spaces for men and women, for socio- economic development. These need to be realised by implementing appropriate socio-economic interventions with relevant cultural contexts. There is therefore need to work towards implementation of policies and programmes that will ensure maintenance of socio-economic and political justice for all its citizenry, irrespective of gender.

The following key recommendations are made:

1. **Contradiction with Revised National Population Policy:** The declining marriage rates in Botswana contradict the goals of the Revised National Population Policy, which emphasizes promoting marriage as an institution. This suggests a discrepancy between policy objectives and societal trends, requiring a reassessment of strategies to align with current realities.

2. **Increasing Rate of Never Marrying:** The rise in the proportion of individuals reporting never marrying indicates a shift in societal norms and attitudes towards marriage. This trend may reflect evolving social and cultural dynamics, including changing perceptions of marriage's significance and alternative lifestyle choices as postulated by the Social Exchange Theory.

3. **Gender Discrepancy in those Married:** The results show a trend of men experiencing marriage up to advanced ages than females. This is indicative of the possibility of men re-marrying than women after marriages are dissolved. Further research needs to stem out the factors associated with this trend, in a bid to come up with programmes that can stabilise first marriages, more especially when dissolution is through a divorce, not death.

4. **Urgent Need for Action:** The evidence underscores the urgency of implementing effective strategies to address the decline in marriage rates and protect the institution of marriage from further erosion. Failure to act may result in long-term societal implications, including potential challenges related to family structure, social cohesion, and economic stability.

5. **Persistent Issue of Child Marriage:** Despite international agreements and national legal instruments outlawing child marriage, its existence persists in Botswana, as evidenced by the 2022 Population and Housing Census (PHC) data. This highlights the gap between policy intentions and on-the-ground realities, necessitating enhanced enforcement mechanisms and targeted interventions to eradicate this harmful practice.

6. **International Commitments:** Botswana is bound by various international agreements and conventions, including the Convention on the Rights of the Child and the Convention on the Elimination of all Forms of Discrimination against Women, which call for the elimination of child marriage. Fulfilling these commitments requires concerted efforts at both the national and international levels to address the underlying factors contributing to child marriage and protect the rights of vulnerable individuals, particularly young girls.

6. CONCLUSIONS AND RECOMMENDATIONS

In summary, the findings underscore the need for comprehensive and coordinated efforts to address the declining marriage rates and eradicate child marriage in Botswana. This entails aligning national policies with societal realities, enhancing enforcement mechanisms, raising awareness, and fostering collaboration among stakeholders to safeguard the institution of marriage and promote the well-being of all individuals, especially vulnerable populations.

APPENDICES

APPENDIX 1: Population aged 10 years and over by marital status, sex, and age, 2022

SEX AND AGE	MARRIED	NEVER MARRIED	LIVING TOGETHER	SEPARATED	DIVORCED	WIDOWED	TOTAL %	NUMBER
MALE								
10 – 14	-	100.0	-	-	-	-	**100.0**	114,380
15-19	-	99.7	0.3	-	-	-	**100.0**	96,830
20-24	0.7	94.7	4.5	-	-	-	**100.0**	90.587
25-29	3.1	85.3	11.4	-	0.1	-	**100.0**	91,809
30-34	8.8	75.2	15.7	0.1	0.2	-	**100.0**	88,106
35-39	17.8	63.9	17.6	0.1	0.5	0.1	**100.0**	89,442
40-44	27.4	54.4	16.7	0.2	1.0	0.3	**100.0**	75,057
45-49	36.2	46.5	14.7	0.3	1.7	0.6	**100.0**	59,639
50-54	43.3	39.7	13.2	0.4	2.3	1.2	**100.0**	41,888
55-59	47.0	35.4	12.1	0.4	2.9	2.3	**100.0**	31.378
60-64	51.3	30.7	11.1	0.4	3.1	3.3	**100.0**	24,676
65-69	54.9	26.8	9.2	0.6	3.4	5.2	**100.0**	19,111
70-74	55.4	25.2	9.4	0.6	2.7	6.6	**100.0**	12,647
75-79	57.0	23.7	7.5	0.5	2.5	8.9	**100.0**	7,801
80+	53.7	24.3	6.2	0.4	1.7	13.8	**100.0**	11,041
TOTAL	**16.7**	**72.0**	**9.6**	**0.1**	**0.7**	**0.8**	100.0	**854,392**
FEMALE								
10 – 14	-	100.0	-	-	-	-	**100.0**	112,493
15-19	0.3	98.1	1.6	-	-	-	**100.0**	95.511
20-24	2.3	86.8	10.8	-	-	-	**100.0**	92,785
25-29	7.1	76.2	16.4	0.1	0.2	-	**100.0**	96,750
30-34	15.9	65.8	17.5	0.2	0.5	0.1	**100.0**	93,899
35-39	24.6	57.7	16.0	0.2	1.1	0.5	**100.0**	94,052
40-44	30.0	53.3	13.4	0.3	1.9	1.2	**100.0**	77,709
45-49	33.3	49.5	11.2	0.4	2.8	2.8	**100.0**	60,039
50-54	34.4	47.3	8.7	0.5	3.6	5.5	**100.0**	45,055
55-59	34.2	45.5	6.9	0.5	3.8	9.1	**100.0**	39,098
60-64	32.3	44.3	5.5	0.5	3.7	13.7	**100.0**	32,332
65-69	30.0	42.3	3.9	0.5	3.4	19.9	**100.0**	25,532
70-74	27.5	39.6	3.3	0.4	2.8	26.5	**100.0**	17,190
75-79	23.4	39.9	2.2	0.4	2.3	31.7	**100.0**	11,717
80+	17.0	42.6	1.4	0.2	1.5	37.3	**100.0**	21,445
TOTAL	**16.2**	**69.1**	**9.5**	**0.2**	**1.2**	**3.8**	100.0	**915,507**

APPENDIX 1 CONT'D: Population aged 10 years and over by marital status, sex, and age, 2022

SEX AND AGE	MARRIED	NEVER MARRIED	LIVING TOGETHER	SEPARATED	DIVORCED	WIDOWED	TOTAL %	NUMBER
BOTH								
10 – 14	-	100.0	-	-	-	-	**100.0**	226,873
15-19	0.2	98.9	1.0	-	-	-	**100.0**	192,341
20-24	1.5	90.7	7.7	-	-	-	**100.0**	183,372
25-29	5.2	80.6	14.0	0.1	0.1	-	**100.0**	188,559
30-34	12.5	70.4	16.6	0.1	0.3	0.1	**100.0**	182,005
35-39	21.3	60.7	16.8	0.2	0.8	0.3	**100.0**	183,494
40-44	28.7	53.8	15.0	0,2	1.5	0.7	**100.0**	152,766
45-49	34.7	48.0	13.0	0.3	2.3	1.7	**100.0**	119,678
50-54	38.7	43.7	10.8	0.4	2.9	3.5	**100.0**	86,943
55-59	39.9	41.0	9.3	0.4	3.4	6	**100.0**	70,476
60-64	40.5	38.4	7.9	0.5	3.5	9.2	**100.0**	57,008
65-69	40.7	35.7	6.1	0.6	3.4	13.6	**100.0**	44,543
70-74	39.3	33.5	5.9	0.5	2.8	18	**100.0**	29,837
75-79	36.8	33.4	4.3	0.5	2.4	22.6	**100.0**	19,518
80+	29.5	36.4	3.0	0.3	1.6	29.2	**100.0**	32,486
TOTAL	**16.5**	**70.5**	**9.5**	**0.2**	**1.0**	**2.4**	**100.0**	**1,769,899**

APPENDIX 2: Percentage Distribution of Population by Age, Marital Status and Sex, 2011.

AGE	NEVER MARRIED		MARRIED		LIVING TOGETHER		SEPARATED DIVORCED		WIDOWED	
	M	F	M	F	M	F	M	F	M	F
<15	98.2	98.6	0.6	0.5	1.0	0.8	0.0	0.0	0.1	0.1
15-19	96.6	92.7	0.9	1.0	2.3	6.1	0.1	0.1	0.1	0.1
20-24	84.9	67.1	1.8	3.9	13.0	28.5	0.2	0.4	0.1	0.1
25-29	64.6	50.2	5.9	11.8	29.0	37.2	0.3	0.6	0.1	0.2
30-34	47.7	42.0	15.0	21.8	36.3	34.1	0.6	1.2	0.3	0.8
35-39	36.9	37.2	26.5	29.6	35.0	29.0	1.1	2.0	0.4	2.1
40-44	29.2	34.3	37.0	34.3	30.9	24.0	1.8	3.2	1.1	4.3
45-49	24.2	32.3	42.9	36.4	28.5	20.1	2.7	4.1	1.8	7.1
50-54	19.7	31.0	49.3	37.4	24.6	15.0	3.5	5.1	2.9	11.4
55-59	15.9	28.9	54.2	37.5	21.6	12.1	4.3	5.2	4.1	16.3
60-64	14.1	26.1	56.3	36.4	20.0	9.1	4.1	4.8	5.6	23.6
65+	11.3	20.8	58.9	26.3	14.0	4.9	3.7	3.2	12.1	44.8

APPENDIX 3: Marital status by District

DISTRICT		MARRIED	NEVER MARRIED	LIVING TOGETHER	SEPARATED	DIVORCED	WIDOWED	DIVORCED BUT NOW LIVING TOGETHER	WIDOWED BUT NOW LIVING TOGETHER	TOTAL
GABORONE	Number	43,903	134,151	16,036	331	2,719	2,501	143	47	**199,831**
	Percent	22.0	67.1	8.0	0.2	1.4	1.3	0.1	0.0	**100.0**
FRANCISTOWN	Number	13,392	53,329	9,312	150	870	1,271	49	48	**78,421**
	Percent	17.1	68.0	11.9	0.2	1.1	1.6	0.1	0.1	**100.0**
LOBATSE	Number	3,311	15,642	3,033	21	195	344	17	12	**22,575**
	Percent	14.7	69.3	13.4	0.1	0.9	1.5	0.1	0.1	**100.0**
SELIBE PHIKWE	Number	5,511	20,346	4,638	52	318	576	59	27	**31,527**
	Percent	17.5	64.5	14.7	0.2	1.0	1.8	0.2	0.1	**100.0**
ORAPA	Number	2,270	3,771	259	6	118	39	9	2	**6,474**
	Percent	35.1	58.2	4.0	0.1	1.8	0.6	0.1	0.0	**100.0**
JWANENG	Number	3,583	8,999	1,655	17	196	123	19	3	**14,595**
	Percent	24.5	61.7	11.3	0.1	1.3	0.8	0.1	0.0	**100.0**
SOWA	Number	591	1548	294	0	25	14	4	2	**2,478**
	Percent	23.8	62.5	11.9	0.0	1.0	0.6	0.2	0.1	**100.0**
SOUTHERN	Number	16,763	73,325	9,695	149	755	3,451	50	55	**104,243**
	Percent	16.1	70.3	9.3	0.1	0.7	3.3	0.0	0.1	**100.0**
BAROLONG	Number	6,627	29,022	5,337	76	363	1,531	46	52	**43,054**
	Percent	15.4	67.4	12.4	0.2	0.8	3.6	0.1	0.1	**100.0**
NGWAKETSE WEST	Number	1,648	13,396	1,853	16	75	225	5	8	**17,226**
	Percent	9.6	77.8	10.8	0.1	0.4	1.3	0.0	0.0	**100.0**
SOUTH EAST	Number	16,806	63,567	6,517	138	1,022	1,891	60	27	**90,028**
	Percent	18.7	70.6	7.2	0.2	1.1	2.1	0.1	0.0	**100.0**
KWENENG EAST	Number	45,163	186,093	15,962	327	2,205	5,488	192	103	**255,533**
	Percent	17.7	72.8	6.2	0.1	0.9	2.1	0.1	0.0	**100.0**
KWENENG WEST	Number	6,048	28,496	5,675	97	243	1,074	35	43	**41,711**
	Percent	14.5	68.3	13.6	0.2	0.6	2.6	0.1	0.1	**100.0**
KGATLENG (Wards)	Number	17,906	66,480	6,291	147	1,180	2,403	84	56	**94,547**
	Percent	18.9	70.3	6.7	0.2	1.2	2.5	0.1	0.1	**100.0**
CENTRAL SEROWE -PALAPYE	Number	20,963	112,586	10,166	210	1,388	4,296	96	139	**149,844**
	Percent	14.0	75.1	6.8	0.1	0.9	2.9	0.1	0.1	**100.0**
CENTRAL MAHALAPYE	Number	13,316	70,819	6,904	187	944	3,047	65	81	**95,363**
	Percent	14.0	74.3	7.2	0.2	1.0	3.2	0.1	0.1	**100.0**
CENTRAL BOBONONG	Number	8,540	36,981	6,380	137	618	2,012	77	78	**54,823**
	Percent	15.6	67.5	11.6	0.2	1.1	3.7	0.1	0.1	**100.0**
CENTRAL BOTETI	Number	7,292	39,349	5,497	83	471	1,382	51	66	**5,4191**
	Percent	13.5	72.6	10.1	0.2	0.9	2.6	0.1	0.1	**100.0**
CENTRAL TUTUME	Number	18,873	85,077	9,038	238	1,314	4,103	60	83	**118,786**
	Percent	15.9	71.6	7.6	0.2	1.1	3.5	0.1	0.1	**100.0**

APPENDIX 3 CONT'D: Marital status by District

DISTRICT		MARRIED	NEVER MARRIED	LIVING TOGETHER	SEPARATED	DIVORCED	WIDOWED	DIVORCED BUT NOW LIVING TOGETHER	WIDOWED BUT NOW LIVING TOGETHER	TOTAL
NORTH EAST	**Number**	9,180	31,869	6,446	146	662	2114	52	87	**50,556**
	Percent	18.2	63.0	12.8	0.3	1.3	4.2	0.1	0.2	**100.0**
NGAMILAND EAST	**Number**	11,856	62,951	9,683	95	714	1,355	61	50	**86,765**
	Percent	13.7	72.6	11.2	0.1	0.8	1.6	0.1	0.1	**100.0**
NGAMILAND WEST	**Number**	4,805	35,448	8,523	137	247	845	44	74	**50,123**
	Percent	9.6	70.7	17.0	0.3	0.5	1.7	0.1	0.1	**100.0**
CHOBE	**Number**	3,300	14,325	3,652	29	184	342	16	11	**21,859**
	Percent	15.1	65.5	16.7	0.1	0.8	1.6	0.1	0.1	**100.0**
DELTA	**Number**	242	1,536	482	0	19	31	2	3	**2,315**
	Percent	10.5	66.3	20.8	0.0	0.8	1.3	0.1	0.1	**100.0**
GHANZI	**Number**	4,299	26,644	7,736	139	295	542	50	42	**39,747**
	Percent	10.8	67.0	19.5	0.3	0.7	1.4	0.1	0.1	**100.0**
CKGR	**Number**	41	206	106	2	0	9	0	0	**364**
	Percent	11.3	56.6	29.1	0.5	0.0	2.5	0.0	0.0	**100.0**
KGALAGADI SOUTH	**Number**	3,085	19,033	2,752	16	189	434	14	16	**25,539**
	Percent	12.1	74.5	10.8	0.1	0.7	1.7	0.1	0.1	**100.0**
KGALAGADI NORTH	**Number**	2,169	12,447	2,229	38	136	353	3	6	**17,381**
	Percent	12.5	71.6	12.8	0.2	0.8	2.0	0.0	0.0	**100.0**
TOTAL	**Number**	291,483	1,247,436	166,151	2,984	17,465	41,796	1,363	1221	**1,769,899**
	Percent	16.5	70.5	9.4	0.2	1.0	2.4	0.1	0.1	**100.0**

SOURCE: 2022 PHC

APPENDIX 4: Population 10 years and over by Marital Status, Residence and Religion

RESIDENCE AND RELIGION	MARITAL STATUS						TOTAL %	NUMBER
	MARRIED	NEVER MARIED	LIVING TOGETHER	SEPARATED	DIVORCED	WIDOWED		
RESIDENCE								
Towns	20.4	66.8	10	0.2	1.2	1.4	100	355,901
Urban Villages	16.2	72.8	7.5	0.1	1	2.4	100	844,344
Rural areas	14.4	69.4	12.3	0.2	0.3	2.9	100	569,654
RELIGION								
Christianity	18	68.4	9.7	0.2	1.1	2.6	100	1,454,090
African Traditional	13.2	67.2	15.5	0.3	0.9	2.8	100	66,762
No religion	9.7	75.5	12.6	0.2	0.6	1.4	100	119,967
Other	30.6	58.7	7.8	0.2	1.1	1.6	100	29,348

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MIGRATION

Migration and Urbanisation
Profile of migration in Botswana: Evidence from the 2022 Botswana Population and Housing Census

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1. INTRODUCTION

Botswana is experiencing dynamic changes in migration. A comprehensive profile of migration is required for significant policy changes. As a result, profiling migration for Botswana provides a best practice guide to migration governance for the country. To adequately do this, there is a need to understand recent internal migration patterns. This is essential in planning for the welfare of the migrant population since migrants have been associated with positive impacts on economic development of their place of destination. Additionally, migration can contribute to poverty reduction and improve living conditions, as migrants and their households may have higher incomes and access to better opportunities. Accurate and comprehensive data are necessary to assess the various dimensions of migration and its effects on different aspects of socio-economic development. Understanding this link is crucial for policymakers and other stakeholders to develop effective migration policies and strategies that maximize the benefits of migration while mitigating potential negative impacts. This paper provides an opportunity for the government in terms of having detailed data on the profile of internal migrants for the country. It also stimulates population policy action to integrate migration issues into development planning of the country. The National Development Plan 12 (NDP) is currently under development and integration of migration issues into the NDP is vital since migration significantly impacts population dynamics, including population growth, demographic composition, and spatial distribution. By considering migration in national development planning, policymakers can better anticipate population changes and plan for their implications on areas such as healthcare, education, housing, and infrastructure development.

2. Objectives

The objectives of this paper are to:

- **i)** Profile migration during the past one (1) and five (5) years (periodic migration) before the 2022 Population and Housing Census (PHC).
- **ii)** Assess net migrations in the past one and five years before the 2022 PHC.
- **iii)** Assess migration differentials for Botswana during the 2022 PHC
- **iv)** Present migration changing patterns during the past one and five years before the 2022 PHC.
- **v)** Propose policy recommendations for migration.

3. LITERATURE REVIEW

Botswana is a country with an unusually rich migration history. Available evidence indicates that internal migration history of Botswana is shaped by a variety of social, economic, and political factors (Campbell, 2023). Before European colonization, internal migration in Botswana was influenced by factors such as seasonal changes, availability of water and pasture, and interactions between different ethnic groups (Motlhatlhedi and Nkomazana, 2018). Nomadic pastoralism was common among groups such as the Tswana, Kalanga, and San, who moved with their livestock in search of grazing land and water sources (Basupi et al. 2017). During the colonial era, internal migration patterns in Botswana were influenced by the expansion of colonial administration, missionary activities, and labor migration to neighboring countries such as South Africa (Motlhatlhedi & Nkomazana, 2018). The colonial authorities implemented policies that restricted the movement of indigenous populations, particularly the San, and encouraged sedentary settlement in designated areas (Domínguez & Luoma, 2020).

After gaining independence in 1966, Botswana experienced rapid urbanization and internal migration as people moved from rural areas to urban centers in search of employment opportunities, education, and better living standards (Campbell, 2010). Areas such as Gaborone, Francistown, and Selebi-Phikwe emerged as major economic and administrative hubs, attracting migrants from rural areas and neighboring countries. Internal migration in Botswana has been heavily influenced by labor migration, both within the country and to neighboring countries such as South Africa and Zimbabwe. Migrant workers, particularly from rural areas, have sought employment in mining, agriculture, construction, and other sectors, contributing to urbanization and economic growth (van der Post, 1991, Oucho et al. 2000; Gwebu 2003a). Although the history of internal migration is well documented, starting from as far as the work of anthropologist Isaac Schapera in the 1930s and 1940s and through the Southern Africa Migration Project (SAMP) in the late 1990s and early 2000s (Schapera, 1947; Oucho et al. 2000), a more recent profile is required to align with current national trends.

The main source of migration data in Botswana has been the Population and Housing Census (PHC) which has acted as a rich source to provide estimates for patterns and differentials for migration. An analysis of data from the previous censuses indicates an increasing trend of internal migration over the years (Navaneetham & Dwivedi, 2014). For instance, data on internal migration from the 1991 census reveals that urban-urban migration accounted for 34.4% of the movement, rural-urban for 25.5%, urban-rural for 20.9% and rural-rural for 19.2% (Ibid 2014). Meanwhile, data from the 2001 PHC indicates that some districts, especially the Northeast and Southern Districts recorded the highest out-migration rates (Central Statistics Office, 2001). During this period, the Northeast District was characterized by population pressure and low rural employment prospects and most of the out-migration must have been directed to those areas offering better employment prospects such as Francistown City (Central Statistics Office, 2001). Rural migrants were thus probably attracted to the nearby urban centers.

In 2011 it was observed that the two cities namely Gaborone and Francistown, which were net in-migration areas before 2001, had now started becoming significant net out-migration areas. Similarly, the districts such as Serowe-Palapye and Central Tutume, which were of net out-migration before 2001, had become net in-migration districts by 2011 (Navaneetham & Dwivedi, 2014). The district Kweneng East received migrants from other districts, notably from Gaborone. One of the possible explanations given for the observed trend was that people from Gaborone city may be moving out to the suburban fringe in the Kweneng East. Also, the flow of population movements was significant between Francistown and Central Tutume. Obviously, the distance is a crucial factor for population movements in the country. Also increasing urbanization might have put the pressure on the people to move to the sub-urban areas in the neighboring districts during the 2001-2011 intercensal period.

Given changing migration patterns a more recent profile of internal migration is required. Findings from this paper will provide a clear guidance on the patterns and direction of migration in the country. This information will provide effective mechanisms to manage rural-urban migration through identifying districts with high migration rates.

4. RESEARCH METHODOLOGY

Data used for analyses in this paper was derived from the Botswana Population and Housing Census (PHC) conducted in 2022. The PHC 2022 was a comprehensive nationwide survey conducted to gather demographic, social, and housing information about the population of Botswana. The primary objective of the census was to collect accurate and up-to-date data on the population and housing characteristics of Botswana. The conceptualization of migration for this study is derived based on the UN multilingual demographic dictionary which defines "Migration" as a form of spatial mobility between one geographical unit and another, involving a permanent change of residence (International Organization for Migration, 2019). For this paper, geographic unit for internal migration is all districts as per the geographic boundary given in the census. The census questions used for estimating migrations are.

(i) Place of usual residence on the census date
(ii) Place of usual residence 1 year ago and
(iii) Place of usual residence 5 years ago.

We have used period migration (not lifetime migration) to profile the movements of people across districts in the country. We considered migration during the interval 2017-2022 and migration during the period 2021-2022. If a person's place of current usual residence was different from the place of usual residence five years ago or one year ago, he/she was considered a migrant and that move occurred during the interval of five years or one year. Although this method has limitations it is more apt than the lifetime method which gives gross underestimates. The main limitation of the period migration method is that it does not consider the persons who move away and die during the interval. Moreover, if a migrant has made more than one move before the census date, those moves would not be considered while computing the migration during the interval (United Nations 1970). Descriptive statistical methods were used to analyze the census data. The results are presented in tables, graphs and charts.

5. RESULTS

5.1 Migration during 2017-2022

The analysis in this part uses period migration due to the need to understand the recent patterns of migration between districts. The attempt was made to estimate migration that occurred during the period 2017-2022. This was estimated using information on the place of residence, on the census date and place of last residence five years ago from the census date. It was estimated that there were 317,493 flow of in-migrations and 276,198 flows of out migrations across districts during the past 5 years before the census (Table 1). Gaborone had the largest number of in-migrants, followed by Kweneng East (43,129), South East (23,454), Central Serowe-Palapye (22,385), Francistown (18,355), Kgatleng (18,191) and Southern District (15,261), respectively. Districts with the lowest number of in-migrants were CKGR and the Delta.

TABLE 1: District-wise Migration During the Last Five Years (2017-2022)

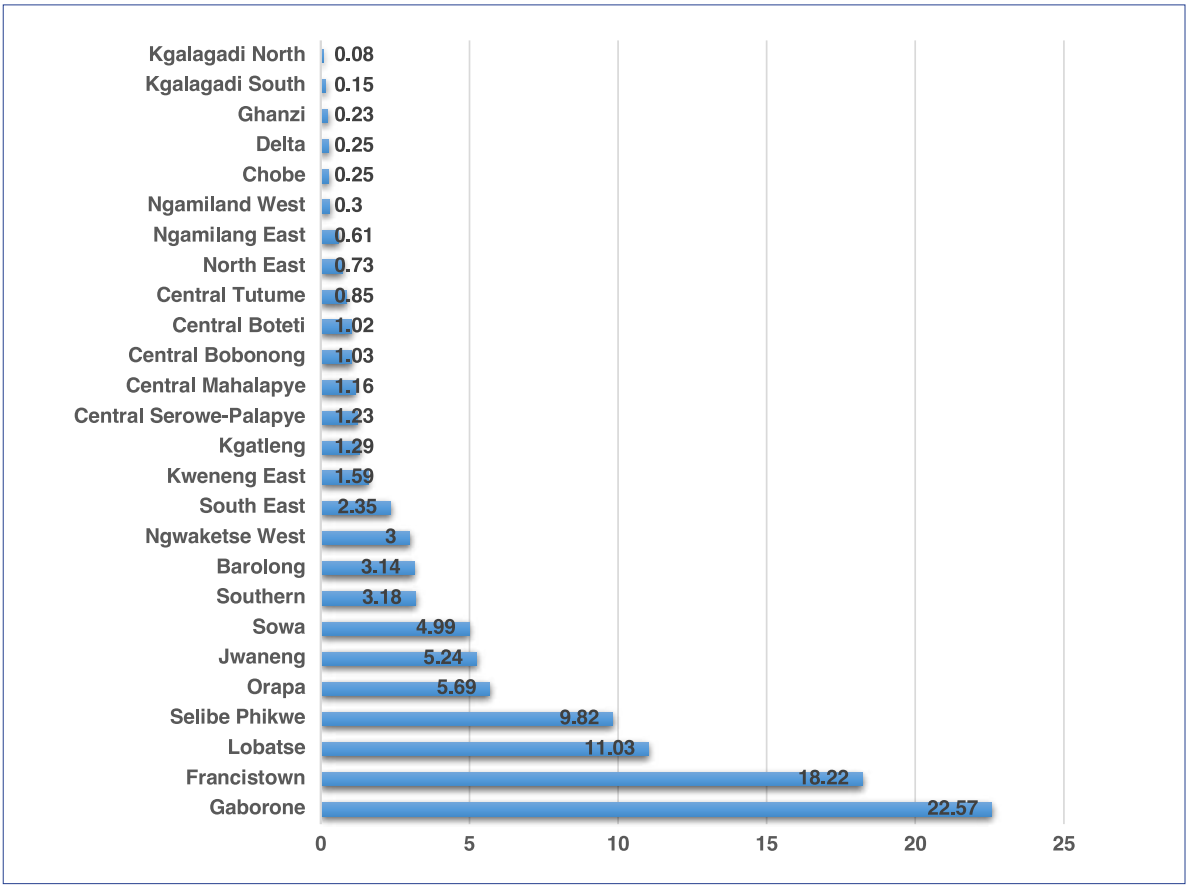
DISTRICT	POPULATION	NUMBER OF			RATE		
		IN MIGRANTS	OUT MIGRANTS	NET MIGRATION	IN MIGRATION	OUT MIGRATION	NET MIGRATION
Gaborone	246,327	44,675	64,322	-19,647	18.1	26.1	-8.0
Francistown	103,416	18,355	26,980	-8,625	17.7	26.1	-8.3
Lobatse	29,772	5,996	7,056	-1,060	20.1	23.7	-3.6
Selibe Phikwe	42,486	7,464	10,615	-3,151	17.6	25.0	-7.4
Orapa	8,648	2003	3,575	-1,572	23.2	41.3	-18.2
Jwaneng	18,785	4,642	5,764	-1,122	24.7	30.7	-6.0
Sowa	3,267	1257	1181	76	38.5	36.1	2.3
Southern	139,356	15,261	12,584	2,677	11.0	9.0	1.9
Barolong	58,904	6,949	4,463	2,486	11.8	7.6	4.2
Ngwaketse West	23,663	2177	3,525	-1,348	9.2	14.9	-5.7
South East	111,447	23,454	8,385	15,069	21.0	7.5	13.5
Kweneng East	330,220	43,129	18,396	24,733	13.1	5.6	7.5
Kweneng West	57,763	4,968	5,171	-203	8.6	9.0	-0.4
Kgatleng (wards)	121,873	18,191	8,783	9,408	14.9	7.2	7.7
Central Serowe -Palapye	202,741	22,385	20,440	1,945	11.0	10.1	1.0
Central Mahalapye	131,975	11,637	11,609	28	8.8	8.8	0.0
Central Bobonong	77,504	8,789	7,292	1,497	11.3	9.4	1.9
Central Boteti	74,553	7,740	6,247	1,493	10.4	8.4	2.0
Central Tutume	164,955	19,304	11,639	7,665	11.7	7.1	4.6
North East	69,353	12,077	7,225	4,852	17.4	10.4	7.0
Ngamiland East	121,396	12,589	10,823	1,766	10.4	8.9	1.5
Ngamiland West	74,151	4,921	5,435	-514	6.6	7.3	-0.7
Chobe	28,742	5,678	4,254	1,424	19.8	14.8	5.0
Delta	2,889	894	254	640	30.9	8.8	22.2
Ghanzi	56,077	6,761	3,770	2,991	12.1	6.7	5.3
CKGR	488	57	144	-87	11.7	29.5	-17.8
Kgalagadi South	35,346	3,137	4,175	-1,038	8.9	11.8	-2.9
Kgalagadi North	23,512	3,003	2065	938	12.8	8.8	4.0
TOTAL	**2,359,609**	**317,493**	**276,198**	**41,295**	**13.5**	**11.7**	**1.8**

Source: Analyzed from the 2022 Population and Housing Census.

5.2 International migration

Figure 1 shows the distribution of international migrants by district. These are people who came from other countries in the past 5 years and were found in the various districts during the census period. Overall, there were 13050 people who were international in-migrants during the 2022 PHC. Most of the international migrants lived in Gaborone (22.57%), Francistown (18.22%), Lobatse (11.03%), Selibe-Phikwe (9.82%), Orapa (5.69%) and Jwaneng (5.24%),respectively.

FIGURE 1: The distribution of international migrants by districts, 2022 (N=13050)

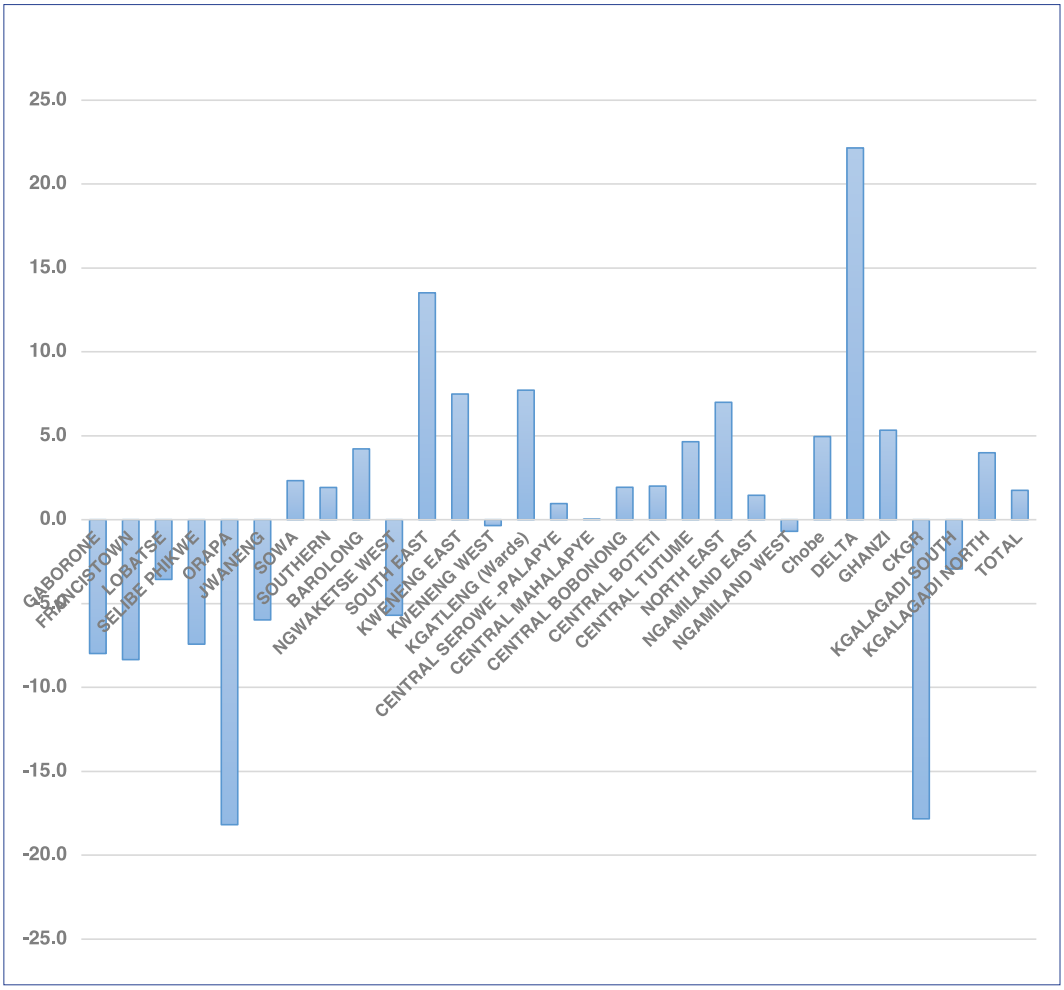


Source: Analyzed from the 2022 Population and Housing Census.

5.3 Net migration 2017-2022

It was noted that some districts such as Gaborone, Francistown, Lobatse, Selibe Phikwe, Orapa, Jwaneng, Sowa, Ngwaketsi West, Kweneng West, Central Serowe-Palapye, Delta, CKGR, and Kgalagadi South experienced significant net-outmigration as shown by negative net migration in **Figure 2.** On the other hand, districts such as Southern, Borolong, South East, Kweneng East, Kgatleng Central Mahalapye, Central Bobonong, Central Boteti, Central Tutume, North East, Ngamiland East, Ngamiland West, Chobe, Ghanzi and Kgalagadi North experienced net inflow of migrants. However, the inflow of migrants was found to be particularly highest in the South East District, Kweneng East and Kgatleng, while outflow of migrants was highest in Gaborone, Francistown and Selibe Phikwe, respectively.

FIGURE 2: Net Migrations by District in Botswana, 2017-2022



Source: Analyzed from the 2022 Population and Housing Census.

5.4 Migration during 2021-2022

Table 2 gives the estimates of district-wise migrations during 2021-2022. This has been estimated using the information on the place of current usual residence and place of last residence one year ago. The estimates show that there were 176,490 inflow of migrants, and 154,302 out-flow of migrants across districts. In-migrations were highest in districts such as Gaborone (14.71%), Kweneng East (12.03%), Central Serowe-Palapye (7.27%), Central Tutume (6.12%), South East (6.07%), Francistown (5.32%), Kgatleng (5.29%) and Southern (5.16%) respectively, which all had more than 5% of migrants. Although, Gaborone had the highest number of in-migrants the proportion of the outmigrants was higher. Overall, districts such as Gaborone (22.28%), Francistown (8.53%), Kweneng East (8.28%) had the highest proportion of out migrants compared to other districts.

TABLE 2: District-wise Migration During the Last One Year (2021-2022)

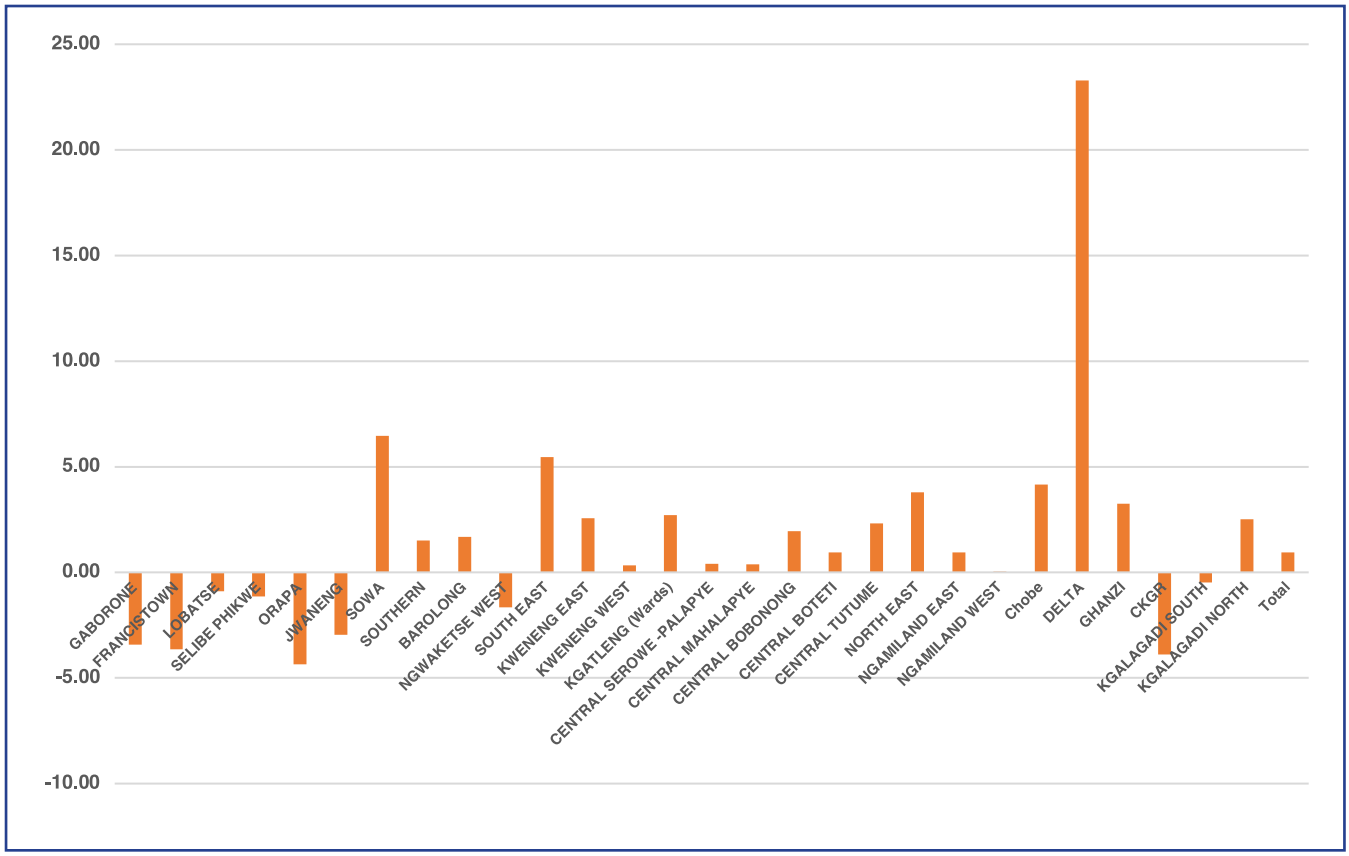
DISTRICT	POPULATION	NUMBER OF			RATE		
		IN MIGRANTS	OUT MIGRANTS	NET MIGRATION	IN MIGRATION	OUT MIGRATION	NET MIGRATION
Gaborone	246,327	25,961	34,381	-8,420	10.5	14.0	-3.4
Fancistown	103,416	9,398	13,167	-3,769	9.1	12.7	-3.6
Lobatse	29,772	2,575	2,845	-270	8.6	9.6	-0.9
SelibePhikwe	42,486	3,402	3,891	-489	8.0	9.2	-1.2
Orapa	8,648	997	1,373	-376	11.5	15.9	-4.3
Jwaneng	18,785	1,941	2,497	-556	10.3	13.3	-3.0
Sowa	3,267	668	457	211	20.4	14.0	6.5
Southern	139,356	9,115	7,029	2,086	6.5	5.0	1.5
Barolong	58,904	3,866	2,872	994	6.6	4.9	1.7
Ngwaketse West	23,663	1633	2,026	-393	6.9	8.6	-1.7
South East	111,447	10,718	4,625	6,093	9.6	4.1	5.5
Kweneng East	330,220	21,223	12,778	8,445	6.4	3.9	2.6
Kweneng West	57,763	3,681	3,493	188	6.4	6.0	0.3
Kgatleng (wards)	121,873	9,342	6,044	3,298	7.7	5.0	2.7
Central Serowe -Palapye	202,741	12,828	12,034	794	6.3	5.9	0.4
Central Mahalapye	131,975	7,227	6,727	500	5.5	5.1	0.4
Central Bobonong	77,504	5,222	3,720	1,502	6.7	4.8	1.9
Central Boteti	74,553	4,617	3,912	705	6.2	5.2	0.9
Central Tutume	164,955	10,804	6,995	3,809	6.5	4.2	2.3
North-East	69,353	6,601	3,978	2,623	9.5	5.7	3.8
Ngamiland East	121,396	7,945	6,812	1,133	6.5	5.6	0.9
Ngamiland West	74,151	4,028	4,013	15	5.4	5.4	0.0
Chobe	28,742	3,194	1,996	1,198	11.1	6.9	4.2
Delta	2,889	840	167	673	29.1	5.8	23.3
Ghanzi	56,077	4,460	2,634	1,826	8.0	4.7	3.3
CKGR	488	47	66	-19	9.6	13.5	-3.9
Kgalagadi South	35,346	2,359	2,531	-172	6.7	7.2	-0.5
Kgalagadi North	23,512	1,798	1210	588	7.6	5.1	2.5
Total	**2,359,609**	**176,490**	**154302**	**22,188**	**7.5**	**6.5**	**0.9**

Source: Analyzed from the 2022 Population and Housing Census.

5.5 Net-migration 2021-2022

Figure 3 shows net migration rates for various districts across the country. The results indicate that cities (Gaborone and Francistown) in Botswana, had the highest negative net migration rate indicating that there was a high proportion of people leaving the two cities. Other areas which experienced a negative net-migration rate include towns such as Lobatse, Selibe-Phikwe Orapa, Jwaneng, Ngwaketsi West, CKGR and Kgalagadi South indicating that the named districts had high out migration rates. On the other hand districts such as the Delta, Sowa and South East had the highest in-migrations.

FIGURE 3: Net migrations by District in Botswana, 2021-2022



Source: Analyzed from the 2022 Population and Housing Census.

5.6 Migration Differentials

This section discusses internal migration differentials in Botswana during the period 2017-2022. These differentials provide a clue to understand the causes and consequences of migration. The 2022 PHC data indicates that the propensity of migration is marginally higher for females compared to males, although not very significant **(Figure 4a)**. This is contrary to the 2011 PHC which indicated that the proportion of male migrants was marginally higher than for females. This finding is quite indicative since in most developing countries males usually outnumber females in the migration streams. This indicates that the proportion of female migrants is starting to increase in Botswana. However, the marginal increase implies that there is non-significant sex selective migration stream in Botswana. The overall sex ratio of the population is favorable to females, and the sex ratio of migration shows an almost similar pattern for the 2022 PHC.

The 2022 PHC data also indicates that propensity to migrate differs according to marital status. The propensity of migration is greater for those who never married (69.25%), followed by those who married (17.05%) and those living together (11.25%). On the other hand, the propensity of migration is lowest for those who are separated, divorced, and widowed **(See figure 4b)**. Overall, the highest proportion of migrants was in the middles ages-15-24 years (25.88%), 25-34 years (28.09%), and 35-59 years (28.45%). This indicates that migration is more common among the productive labour force (15-59 years) in Botswana. Meanwhile, the propensity to migrate is lowest among dependent population groups, 0-14 years and 60 years and above.

The level of education is an important determinant of migration. **Figure 4 (d)** shows migration by education level. Overall, the highest proportion of migrants constituted individuals who had secondary education (46.49%), followed by those with primary education (17.55%) and degree (17.09%), respectively. On the other hand, the proportion of migrants was lowest for diploma and certificate holders, and non-formal and preschool. The high proportion of migrants with secondary education is indicative of the education level characteristics for the general population of Botswana, which is constituted by a high number of people who have completed secondary education, than certificate, degree or diploma.

FIGURE 4(A)Migration by sex of respondents

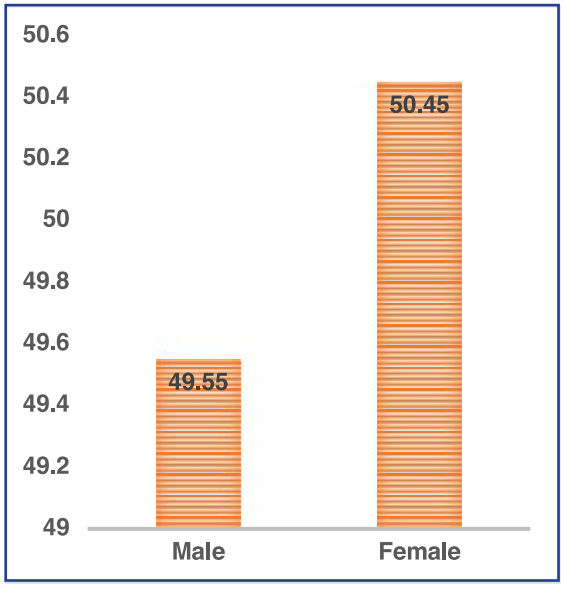


FIGURE 4(B) Migration by marital status

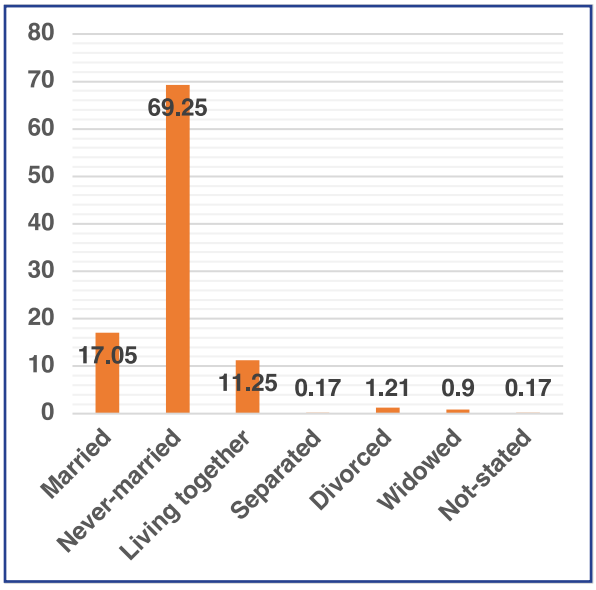


FIGURE 4(C) Migration by age

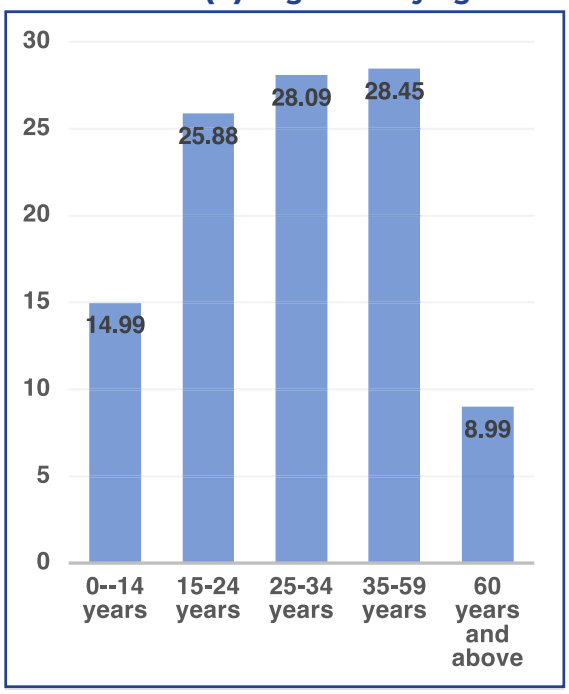
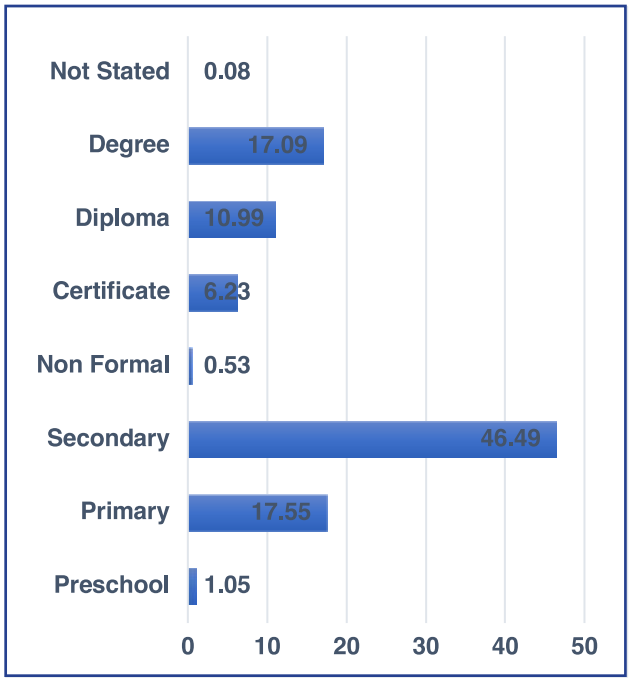


FIGURE 4 (D) Migration by Education



Source: Analyzed from the 2022 Population and Housing Census.

5.6 Migration Changing Patterns

Table 3 shows the changing patterns of district wise migrations during the intercensal period. Five years before the census, the highest migration inflows were found in districts such as Delta, South East, Kweneng East, Kgatleng, North East, Central Tutume, Chobe and Ghanzi, respectively. Similar observation was made for the past one year before the census, where the highest migration inflows were found in the same districts- Delta, Sowa, South East, Kweneng East, Central Tutume, North East, Chobe and Ghanzi. It was noted that outmigration significantly occurred in- Gaborone, Francistown, Selibe Phikwe, Lobatse, Orapa, Jwaneng, Ngwaketsi West and CKGR in the past five years, while in the past one year it occurred in- Gaborone, Francistown, Selibe Phikwe, Jwaneng, Orapa, Ngwaketsi West and CKGR.

TABLE 3: Changing Patterns of District-wise Migrations in Botswana, 2022

MIGRATION INTERVAL	NET IN-MIGRATION DISTRICTS	NET OUT-MIGRATION DISTRICTS
Migrations during 2017-2022	Delta, South East, Kweneng East, Kgatleng, North East, Central Tutume, Chobe and Ghanzi	Gaborone
		Francistown
		Selibe Phikwe
		Lobatse
		Orapa
		Jwaneng
		Ngwaketsi West
		CKGR
		Kgalagadi South
Migrations during 2021-2022	Delta Sowa South East Kweneng East Central Tutume North East Chobe Ghanzi	Gaborone
		Francistown
		Selibe Phikwe
		Jwaneng
		Orapa
		Ngwaketsi West
		CKGR

6. DISCUSSION

This paper profiles migration for Botswana using the 2022 PHC data. It has been observed that the two cities, Gaborone and Francistown, experienced the highest net out-migrations in 2017-2022. This indicates that since 2011, the two cities have become net out-migration districts unlike in 2001 when they had the highest net in-migration (Navaneetham and Dwivedi, 2014). Several factors may explain the high net out-migration rate from Gaborone and Francistown. First, the country is experiencing rapid urbanization which has spurred the movement of people from the two cities to other urban areas in the country. Second, the high cost of living, including high costs of housing, transportation, and necessities in the two cities can drive people, especially those with lower incomes, to seek more affordable options in the peri-urban areas around the cities. For instance, estimates indicate that neighboring districts to Gaborone such as South East, Kgatleng and Kweneng East have high net in-migration while for Francistown neighboring districts such as North East and Central Tutume are experiencing significant in-migration. Third, limited availability of affordable housing, particularly for low and middle-income individuals and families, can force people to move to suburban or rural areas where housing options are more plentiful and affordable. This is explained by growing net in-migration into the villages in neighboring districts of the two cities.

Similarly, it was noted that Selibe Phikwe also had high net out-migration during 2017-2022. Although it is not possible to explain from the data the destination and reasons for out-migrants from Selibe Phikwe, the reasons for outmigration from the town can be assumed. The only neighboring district to Selibe Phikwe which experienced significant net in-migration is Central Bobonong, which may be a prospective destination for migrants from Selibe Phikwe. The high net out-migration for Selibe Phikwe in the period between 2017-2022 can be linked to the closure of the Bamangwato Concession Limited (BCL) mine. Closure of the BCL mine resulted in the loss of jobs for a significant number of workers who were employed directly by the mine and those indirectly employed in associated industries. This loss of employment may have prompted individuals and families to relocate in search of new job opportunities in other districts or sectors.

Other mining towns which have shown high net out-migrations are Sowa Town, Orapa and Jwaneng. Mining towns are often heavily reliant on the mining industry, which is susceptible to fluctuations in global commodity prices. Economic downturns or closures can lead to job losses and reduced economic opportunities, prompting people to seek employment elsewhere. Moreover, the nature of employment in mining towns may offer limited career advancement opportunities, particularly for individuals seeking to develop skills or pursue alternative career paths. This lack of upward mobility can drive skilled workers to migrate to other urban centres or other districts with better prospects.

Kweneng East, Kgatleng and South East have continued to receive migrants from other districts, notably from Gaborone. It is possible that the people from Gaborone city may be moving out to the suburban fringe in these three districts. Also increasing urbanization might have put pressure on the people to move to the sub-urban areas in the neighbouring districts. Other districts which have experienced net in-migration are Southern and Borolong Districts which are also near to Gaborone City. Districts near the city receive migrants through urban sprawl. Moreover, increased population growth in Cities, driven by factors such as high birth rates, improved healthcare, and declining mortality rates, contributes to urban sprawl as the two cities (Gaborone and Francistown) expand to accommodate growing populations. In-migration exacerbates this trend by adding to the demand for housing, infrastructure, and services. Another reason for the observed urban sprawl into the areas surrounding the cities is the demand for housing that outstrips supply, leading to the expansion of residential areas into surrounding peri-urban or rural areas. In-migrants may move to these areas in search of affordable housing options or to escape high housing costs.

7. CONCLUSIONS

The findings in this paper indicate that internal migration flows are likely to increase across districts with more net in-migration districts experiencing out-migration flows and vice versa in the future. As a result, appropriate migration governance policy actions need to be put in place to manage internal migration flows. Net outmigration from urban districts like Gaborone, Francistown, Selibe Phikwe, Jwaneng and Orapa may result from unemployment, high cost of living and shifting settlement patterns influenced by rising land prices or the return of families to their places of origin. Therefore, there is a need to create more employment opportunities in the areas where net outmigration is quite high. Similarly, there must be appropriate actions taken to cater for the population coming to areas where net in-migration is high. A suitable policy framework must be formulated to address the needs arising from population movements, including housing, water, sanitation, educational opportunities, and other essential infrastructure requirements. The main limitation with the PHC data that has been used in this paper is that the reasons for migration are not recorded. It would be better if the census questionnaire included the reason for migration to understand factors explaining migration across different districts.

8. RECOMMENDATIONS

To manage migration, the following policy recommendations are suggested.

8.1 Policy level

i) **Economic diversification**- Since cities and towns such as Gaborone, Francistown, Lobatse, Orapa, Jwaneng and Selibe-Phikwe are experiencing high out migration rates due to unemployment, economic diversification to create job opportunities and improve living standards must be encouraged in rural areas. This can be achieved through investment in agriculture, small-scale industries, tourism, and other sectors that capitalize on local resources and expertise.

ii) Improve infrastructure in rural areas to make them more attractive for both businesses and residents to reduce rural-urban migration. This includes investing in roads, public transportation, healthcare facilities, schools, and other essential services.

iii) Implement existing redistribution policies to improve housing affordability in both urban and rural areas. This can include incentives for affordable housing development, land use planning regulations, and housing subsidy programs targeted at low-income families to reduce migration rates

iv) Develop district development plans that consider the interconnectedness of urban and rural areas. This involves coordinated efforts between local and national governments to ensure balanced development and resource allocation.

v) Implement land use policies that prevent urban sprawl and promote sustainable land use practices. This can include zoning regulations, land preservation initiatives, and incentives for environmentally friendly development.

8.2 Program level

i) Develop comprehensive databases and analytical tools to monitor migration patterns, demographic changes, and socioeconomic indicators in each district. This data-driven approach will help policymakers understand the underlying causes of migration and tailor interventions accordingly.

ii) Invest in infrastructure projects to improve connectivity, access to basic services, and quality of life in migrating districts. This could include road construction, electrification, water supply, sanitation, healthcare facilities, and educational institutions.

iii) Conduct information dissemination and awareness campaigns to educate migrants about available opportunities, rights, and support services in both sending and receiving districts. This could involve using various communication channels such as radio, television, social media, and community events.

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CONTEMPORARY INTERNATIONAL MIGRATION IN BOTSWANA: EMIGRANTS AND IMMIGRANTS – 2022 BOTSWANA POPULATION AND HOUSING CENSUS

Elizabeth P Mukamaambo

EXECUTIVE SUMMARY

Migration can be a dependent as well as an independent activity depending on the circumstances of occurrence. As a dependent one, it can be a response to the push factors associated with social, economic, political and cultural factors. As an independent occurrence, it initiates social, economic, political and cultural changes. The main objectives of this paper were to study trends in international migration based on information collected on absentees and non-Batswana enumerated in Botswana during the 2022 in terms of numbers, age and sex, levels of education for emigrants and immigrants, selected countries of residence for emigrants and countries of origin for immigrants. Then for emigrant, reasons for being out of the country are also given for 2022. Where possible these are compared to past situations. The numbers of emigrants and immigrants show that Botswana has changed from being a migration sending country to being a migration receiving country. The age and sex distributions of emigrants and immigrants show that for emigrants there is no clear pattern of which ages are predominantly out of the country, while the immigrants show that males are in the majority and that there are relatively more young persons among immigrants. Educationally, Botswana seems to be gaining skilled and semi-skilled persons mainly for neighbouring countries, Zimbabwe topping the list. There seem not be a reciprocal nature in terms of countries where emigrants are and where immigrants come from. Finally education as a reason for being out of the country has overtaken employment as a reason for being out. For a long time Botswana did not have direct policy on migration. The policy was adopted in June 2024, during the dissemination seminar of the 2022 Census. As a result, what has been taking place in the form of emigration and immigration seems to be due the developments that have acted together to discourage would be emigrants and attract immigrants. The main recommendation is that, the new migration policy should be widely disseminated to all stakeholders.

1.0 INTRODUCTION

Migration is one of the three components of population growth. The other two being births and deaths. While births and deaths are easily identified and well defined, migration poses an element of complexity in both definition and measurement. This is because a birth and a death occur only once in one's lifetime whereby once a birth has occurred it becomes a predictable fact that at some point in time a death will occur. All occurrences that happen to an individual between birth and death are just added advantages. It is also known that all persons living will eventually die at some point in future. Migration on the other hand is difficult to measure and predict in that it is never known who among individuals will ever move, where they will go, how many moves they will make, for how long they will there, the point in time they will move, how often they will move and to which places they will move to. Migration can be a dependent as well as an independent activity depending on the circumstances of occurrence. As a dependent one, it can be a response to the push factors associated with social, economic, political and cultural factors. As an independent occurrence, it initiates social, economic, political and cultural changes. There are three categories of movement in relation to migration. The first movement it that which involves change of residence within the same locality, this is usually referred to as local move, and then the second movement is where an individual crosses administrative boundaries within the same country, this is referred to as internal migration. The third movement which is the subject of this paper is that where the mover crosses international borders. This is referred to as international migration. The policies and programmes usually acknowledge the existence of these moves but do not directly aims at influencing the direction or intensity of the process.

People migrate as a result of their own perceived imbalances between two places, a place of origin or sending place where they currently are, and the place of destination or the receiving area where they would like to go. To describe the two areas, Lee in 1961 came up with a theory that explains why people move and the type of imbalances that individuals perceive between the two places. He referred to the imbalances as the push and pull factors. The push factors are the perceived negative aspects of where an individual is, the pull factors being the perceived positive aspects that attract individuals to another location. Furthermore, researchers have indicated that not every individual ever migrates. As is the case of births and deaths, migratory moves are associated with such characteristics as age, sex, educational level even geographical areas.

Historically, Botswana like many other Southern African countries of Lesotho, Swaziland, Malawi, Mozambique and Zambia served as unskilled labour reserve for South African mines, farms and domestic services. The main reason for that scenario was that Botswana was one of the least developed countries with no employment opportunities. Most of the emigrants were unskilled labour migrants seeking sources of livelihood in that country. The situation in Botswana was so bad that according to Magang (2005) international communities felt that Botswana was either naive or "stupid" for jumping from a frying pan into a fire to ask for political independence at the time she did. However, over the years, this system of migration seems to have changed directions where instead of Batswana going out of the country in large number to seek source of livelihood, there has been some form of counter and return migration where Botswana has been attracting people from other countries, something that did not exist in the past. The Revised National Population of 2010 observed that the number of non-Batswana resident in Botswana doubles every ten years since 1971. The numbers increased from about 3,000 in 1971, 16,000 in 1981, 30,000 in 1991, to a further 63,000 in 2001 and 111,846 in 2011. The 2022 census indicated that there were 136,637 non-Batswana in Botswana at the time of the census. These immigrants originate from different countries, therefore, they are globalised. The policy also noted the presence of undocumented immigrants who may not be captured by official data collection systems are a problem common not only to Botswana but faced by many other countries as well. According to the policy, the numbers, though not known are significantly large in that in 2004 alone, there were 2,500 deportations of illegal immigrants per month to one country alone, implying a total annual deportations of 30,000 to that country alone. This is an indication of prevalence of illegal immigrants in the country. Then, there is also emigration where Batswana cross international borders for reasons other than work. Given the porous nature of Botswana borders, there could be illegal Batswana departures as well.

The chapter is outlined as follows: Introduction; objectives, definition of concepts, literature review; methodology, limitation of data; findings and discussion; Government interventions, International pronouncements; summary, conclusions and recommendations.

1.1 Objectives

The main objectives of this paper are to study trends in immigration and emigration in relation to Botswana in terms of numbers, who migrates in terms of sex and age, levels of education for both emigrants and immigrants, countries of residence for emigrants and countries of origin for immigrants.

Definitions

The following definitions are used in this paper, some of which are adopted from the International Organisation on Migration (IOM), 2004.

Emigrants: An individual not present in Botswana at the time of enumeration, these are referred to as absentees by the census.

Batswana: Citizens of Botswana

Brain drain: Emigration of highly skilled individuals from one country to another mainly for employment opportunities purposes

Brain gain: Immigration of highly skilled individuals from one country to another mainly for employment opportunities purposes

Country of Destination: A country where movers want to go or where they are.

Country of origin: Source of migration flow

Emigration: The act of leaving one's country of residence in order to settle in another. For the purposes of this paper, Batswana enumerated outside Botswana or absentees are simply referred to as emigrants International Migration: The movement of people across country boundaries. Ideally for purposes of settlement

Immigration: The process by which non-nationals move into another country for purposes of settlement

Immigrants: Persons found in a country that is not their own. For the purposes of this paper, Non-Batswana enumerated in Botswana are simple referred to as immigrants.

Local move: Change of residence within the same locality

Migrant: a person who moves into another country for purposes of settlement

Migration: The process of moving across international borders

Migration Counter flow: Movement of individuals in the opposite direction of the one where of large numbers of individuals move from

Migration Policy: the general principle by which a government is guided in its management of migration

Receiving country: Also known as country of destination

Reverse migration: Migration streams going to the opposite direction

2.0 LITERATURE REVIEW

There is no doubt of the importance of international migration in the history of Botswana. Migration alleviated the country from the problems of citizen unemployment, providing households with food security though small; also, it provided the much needed money in circulation. This history can be divided into three periods; these are a period before the discovery of minerals, the period during the discovery of the minerals and the period of consolidating the economic impact of the discoveries where there have been massive infrastructural developments. These periods are associated with different directions and volumes of migration.

Since the earliest times, humanity has been on the move, some in search of work or other economic opportunities, joining family or as a form of health seeking behaviour. The Agenda for Sustainable Development 2030 states that there should be orderly, safe regular and responsible migration and mobility through well managed migration policies. For Mukamaambo (2005), human species is a restless one, they move as a result of the process of adapting to its social, economic, cultural and ecological environment. The United Nations (1948) recognises that human movement across borders is a human right, that individuals have a right to freedom of movement, to leave any country including their own and to return to their country of birth at will. As stated by Weller and Bouvier (1981, the movement of people from one nation to another goes far into human history, that it was present even before the foundation of nations the way we know them today. This occurred mainly through slavery and exploration. For Africa such movements were mainly involuntary. Stephen Castles and Mark J Miller (2002) stated that by 1980, over 100 million people were living outside their countries of birth. According to them, these were distributed all over the world. In their neoclassical theory on migration, Massey and colleagues (1993) stated that transnational migration occurs as a result of differences between wages and employment opportunities among poor counties and wealthier countries.

The earliest write-up on human movement was by Ravenstein (1885) who developed laws of migration when he indicated that migration take place within well-defined streams. That for each steam of migration there is a counter stream, implying that for each type of out migration there are people moving from the opposite direction. Then Lee (1966) came up with the reasons that are responsible for such moves. According to him migration can be said to be a response to the push and pull factors. He indicated that the push factors are the characteristics of home areas that are perceived to be negative. These could be wars, famine, diseases, and natural disasters, political or economic stresses that force individuals to leave their home. He indicated that areas that seem to repel people may have positive features for other individuals, the case of one man's poison maybe another man's meat. The pull factors were said to be the positive aspects of the potential receiving country. The decision to move then depends on how strongly individuals feel about each of these factors. According to Stalker (1994), individuals make rational decisions regarding the life in the country where they are and where they intend to move. While studying attitudes of Batswana towards cross-border migration, Mukamaambo (2000) indicated that some people moved because of the link they have with those who have moved to the country of destination before them. The United Nations estimated in 2002 that over 150 million people live outside places of their birth the majority of who were in Africa.

For Massey et al (1993) a period of increasingly restrictive immigration policies is emerging but it is not yet clear how effective the policies will in controlling the volume of migration. Gwebu (2004) indicated that there are three types of immigrants in Botswana; these are the returning residents, incoming investors, or recruited expatriates. For emigrants, the main destination over the years has been South Africa for employment purposes. According to him, the total percent of absentees at household levels decreased from 8.0 percent in 1971, 4.5 percent in 1981, 2.9 in 1991 and 1.7 in 2001, a potential indication of few emigrants and a potential increase in return migrants.

3.0 METHODOLOGY

The 2022 Census collected rich information on absentees and Non-Batswana found in Botswana during the census. For the purposes of this paper as has been the case during the past analytical reports, these are used as proxy for international migration. The main objectives of this paper are to study trends in immigration and emigration in relation to Botswana in terms of numbers, age and sex, levels of education for both emigrants and immigrants. For immigrants information on country of citizenship is analysed while for emigrants, countries where they were during the census are looked at. Given the small numbers of emigrants in some countries and immigrants from the same countries, only selected counties are named the rest are simply regarded as "other countries". Those with unstated countries are left out. Redistributing these among countries may give unreliable distribution that is a reason for ignoring them in the analysis. The main reason for looking at the education level for both emigrants and immigrants is to assess whether or not Botswana is experiencing brain gain or brain drain

For this paper two sections of the questionnaire are used. Question A07 (3) focusing on citizens of other countries in Botswana according to their countries of citizenship. For ease of analysis and comparability, the countries used are those provided by question A07 (3). It is acknowledged that for each of the previous censuses, there was paper on international migration. The paper just extends the period to 2022 with some variations from previous papers. To explain the observed situation, some available national and international policy documents such as NDP 12, Vision 2036, South African immigration policy of 2002, SADC Migration policy, and United National charter on human movements and, Africa Union 2063 are used. Before analysing the data, the main limitations of census data on international migration are highlighted. There are two main limitations that are likely to have an impact on the presented information. The limitations being that of proxy nature of data collected. Proxy enumeration has been a main limitation in data collection in general. It is expected to be worse for emigration bringing questions of coverage and reliability. The porous nature of Botswana's borders makes it even more complicated as individual are able to move freely among countries neighbouring Botswana. As a result it is not very clear whether persons enumerated as emigrants or immigrants should have been enumerated as such
.

3.1 Limitations of Data

Data collected on international migration have a number of limitations. Among the limitations are the following:

- Definition of migration implies an element of permanence. However, when it comes to international migration as is the case with life time migration, it focuses only on two points, place of birth and place of enumeration, regardless of the reason for being in the country and length of stay in the areas. The idea of permanence is not captured;
- Related to the above, according to the census definition, any person absent from the household for a period of one month should be regarded as an absentee. This then implies that tabulations on absentees should only cover those absent for that period, but not everyone absent.
- Census by nature uses proxy enumeration. As is the case with any proxy reporting, respondents may not have full migration and personal details of all household members. This is worse when reporting on emigrants, bringing questions of coverage and reliability issues. Some Batswana go out of the country for one purpose, but end up doing something different in that country or go another country without full knowledge of respondents in Botswana. As a result some respondents may still report the original reason for a household member being an emigrant without knowing their current status.
- The porous nature (without proper physical boundaries) of Botswana's borders makes it even more complicated as individuals may have entered the country illegally. These are likely to avoid being enumerated all-together or may be reported as Batswana, leading to under-numeration of immigrants.
- Some immigrants may fail to provide countries of citizenship as at times individuals may link census operations with the Department of Immigration activities.
- It is not possible to cover other forms entries such as trafficking and human smuggling from census data, though they are topical issues.

4.0 FINDINGS AND DISCUSSIONS

As already indicated, not every person ever born shall ever migrate. Apart from personal decision making of moving such as economic or family ties as some of the factors that influence migration decision making, demographers have also looked at other aspect of such moves at societal and economic levels. In that respect, they have looked at demographic profiles of the emigrants and immigrants. It is these demographic profiles that are expected to have the societal and economic impacts. It is through these that they came up with the concept migration selectivity".

Table 1 show that the number of emigrants has been decreasing from one census period to the next. By 2022 the number of emigrants had declined by 86.19 % over the 1971 census figure. The highest decline of over 20,000 persons was between 1971 and 1981. This was a period of major mining activities. Thereafter, the declines were about 10,000 during each intercensal period. One aspect associated with the decline in the number emigrants may be return migrants and fewer persons leaving the country. According to a cited study on the attitudes of Batswana towards cross border movements by Mukamaambo (2001), few Batswana want to leave Botswana and if they ever did, they would want to return to the country at retirement. On the other hand, the number of immigrants in Botswana increased by over 100%. For the immigrants the greatest increase was between 1991 and 2001. The decreases in the number of emigrants and increases in the number of immigrants show that Botswana has become more attractive to both Batswana and Non-Batswana. According to Campbell (2001), when Botswana attained independence in 1966, there were few highly skilled nationals to manage positions deemed critical for development. As a result, the condition necessitated importation of foreign skilled labour to assist in the nation building. At the same time, the government was implementing human resource development for Batswana. This may explain why there have been fewer emigrants over the years. It may imply among other things that the human resource development programme the Botswana government embarked on has been bearing fruits. It is also said that a healthy national economy has been a driving force behind Botswana's transition from a migrant sending country to migrant receiving country where according to Mogalakwe and Siphambe (2001), the objective of rapid economic growth that the government of Botswana embarked on after independence was to ensure that the productive base of the economy would exceed population growth in order to sustain an increase in the average standard of leaving for all.

4.1 Sex Composition

Table 2 shows the demographic sex and ages profiles of both emigrants and immigrants. According to the profiles, there seem to have been more female emigrants than males. This is evidenced by the total sex ratio of 88.43 males per 100 female emigrants in 2022. The 2001 census showed that there were still more males than female emigrants with the sex ratio of 147.3 males per 100 females CSO, 2004). A decline from 159.6 males per 100 females recorded by the 1991 Census. Can this be a reflection of the idea of feminisation of migration that researchers have alluded to, which is one of the stages of migration? According to the theory, as migration process matures, more and more females take part in migration. For immigrants there are generally more males than females as the overall sex ratio for them is 120.13 males per 100 females.

For the age specific sex ratios, the first impression for emigrants is that of an erratic pattern with no clear indication of which age group is experiencing what. Some ages show very high sex ratios while others show very low ratios. This may be a reflection of age misreporting than a true reflection of true age specific sex ratios. It has always been suggested that age is one of those indicators that are prone to being misreported by individuals. It could be worse when a person reported on has been absent for a considerable length of time. Compared to the emigrants, the age specific sex ratios for immigration seems to conform to the theory of sex selectivity of migration as at every age group apart from ages 15-19 and 20-24, which are the age groups of school and tertiary going population, there are more males than females.

4.2 Age distribution

Age is an important aspect in the population studies as it has a lot of influence on demographic and social processes. It is also strongly related to mobility regardless of the distance to be covered. Young adults aged around 20-29 years are said to be more likely to migration than people of other ages (Weekes, 2008). The main reason being that it is the age at which individuals leave home to find employments or seek higher education. It is also easy for individuals in this broad age group to make adjustment at places of destination. They also may not yet be tied to any single place in relation to family as most would still be single. As a result the movement for them would only involve a single person, the self. The other reason for a potential higher propensity of the young people to migrate is that they may not yet be attached to any job in terms of loans, position or life style. In fact, many countries of the world have decried higher unemployment among youth that could explain their likelihood to migrate in large numbers.

The age distribution for emigrants males show that those in the age groups 20 -24 up to 40 – 44 years the proportion is higher. This is also the case with Female emigrants. For both after age groups 40 - 44 years the proportions start going down. A similar distribution is reflected for immigrants. The increase in the percentage is also shown from ages 20 – 24 to 45 - 49 years. For both males and females for the immigrants, the lowest proportions start from age groups 60 – 64 years. This is an indication of a possible existence of return migration due to retirement purposes.

4.3 Educational level of Immigrants and Emigrant

It is believed that the higher a person's education, the greater the amount of mobility (Weller and Bouvier, 1981). (Table 3 shows the number and associated percentages of emigrants and immigrants by educational categories. As is the case with Table 1 that shows the total number of immigrants being more than emigrants, the Table shows a predominance of immigrants at every educational category. That is, numerically there are more immigrants than emigrants at every educational level apart from those with degrees where the percentage of immigrants is slightly lower regardless of their numerical dominance. This scenario seems to answer a question on whether Botswana is experiencing brain gain or brain drain. Using the definition of brain gain as provided in the definitions, section of this paper, which says that brain gain occurs when a country benefits from highly skilled persons, or when immigrants are numerically more than emigrants, using this situation alone, Botswana is experiencing some form of brain gain in that numerically there are more immigrants that emigrants. Even though there are more immigrants with senior secondary than degree level of education, numerically those with degree levels are much more that those with degrees among emigrants. However, without information on the employment status of immigrants, it cannot be said for sure that there is brain gain for Botswana. Since to complete the assessment, the immigrants must be able to get jobs and be willing use skills they acquires elsewhere to benefit their host country. This remains a big question. From the information available for the 2022 census like is the case with previous censuses, information on employment status of every person aged 12 years is available, but it may not provide information on the willingness of immigrants to used skills acquired elsewhere.

4.4 Counties where Immigrants come from and Emigrants go

The initial observation from Table 4 is that out of a total of 136,636 immigrants, a total of 19,281 (14.11%) a significant number had no country of origin reported. This may be due to a deliberate decision by individuals to hide their country of origin especially those who may have entered the country illegally or it may be as a result of proxy enumeration. The former seems to be more plausible. For emigrants, the number of persons with no country of residence reported is only 27 out of 8,698, representing only 0.31%. However, as indicated in the methodology part of the analysis, all those with information not stated are left out. The Table shows the distribution of countries where emigrant are found as well as where the immigrants come from. The other observation is that a dominant country where emigrants are found is not the dominant country were immigrants come from. For emigrants the Table shows that the

historical dominance of South Africa as a destination among Batswana still existed in 2022 with over 40 percent of all emigrants reported as being in that country. This is followed by Zimbabwe with six percent. Other selected African countries had less than two percent of emigrants. For the selected Non-African countries of destination the United Kingdom dominates as county of destination for emigrants, this is flowered by the USA Canada and Australia. All other counties of the world together constituted only 21.7 percent.

For immigrants, a country with most immigrants in Botswana was Zimbabwe with about 73 percent of immigrants coming from that county at the time of the census. This is followed by South Africa with about five percent and then Zambia. Other selected African counties had less than two percent. Among No-African countries China seems to have a relatively more immigrants in Botswana. All other countries that are not specified together contributed about 14 percent. Then, in term of the actual distribution of countries in relation to emigration and immigration, it seems almost of countries of the world have been touched by migration related to Botswana, showing a form of globalisation of migration where there are multi-directional and multi-country of origin for immigrants, even though some country have one or two emigrants or immigrants.

4.5 Reasons for being outside the country among Emigrants

In the past employment featured prominently as a reason for emigrants being outside Botswana for emigrants. Field (1982) purports that high unemployment in Botswana and stagnating revenue from minerals led to an increase in labour migration to other counties. This then tells us that the major reason for migrating from Botswana in the past was for employment reasons. However, reasons for a large number of Batswana returning or not migrating are not immediately clear, but may be explained by some policies and programmes that have put in place that may have attracted Batswana to stay home. **Table 5** shows the reasons for emigrants being outside Botswana in 2022.

The table shows that unlike in the past where the main reason for being outside was employment related, for the 2022 census, the main reason for emigration was education which shows 33.2 percent emigrants being in the education category. Employment as a reason was still significant 28.6 percent. Visiting was also a significant number of 13.6 percent. The relatively higher percentage of study related reasons may explain why more emigrants are found in counties of United Kingdom, America, Canada and Australia where language may not be a major constraint to emigrants as English is the main language of communication in these countries as is the case with Botswana. ;

5.0 IMPACT OF PROGRAMMES ON OBSERVED MIGRATION SITUATION IN THE COUNTRY

Botswana has just adopted a direct migration policy that is yet to be publicised. In the past country allowed unrestricted entry of tourists, visitors and exits of individuals provided they have the required documents of entry and exit. This was in line with the UN recommendation of free movement for all, the SADC migration framework in the pipelines. On the other hand in 2002 South Africa, a traditional destination for emigrants from Botswana adopted an immigration act aimed at regulating admission of persons to that country. That policy restricted who should be allowed in the country and who should not.

According to Mogalakwe and Sipambe (2001), Botswana's development strategy has been based on the philosophy of free enterprise and a market economy. According to them, this has been reflected in development plans that focus on the role of government as a facilitator than being an active participant in production of goods and services. Then, in an endeavour to improve the private sector and empower citizens, the government came up with a number of financial schemes. The poverty alleviating programmes that were put in place by the Botswana Government could also have acted as incentives for would be labour migrants to return in order to take advantage of the improved conditions in the country especial as it was alleged that lack of livelihood in Botswana was a cartelist for labour migration especially to the South African mines in the first (Field, 1982). The poverty alleviating programmes included the following: the Arable Land Development Programme (ALDEP) whose target

were farmers who were living below subsistence levels as measured by the number of cattle they had, which were twenty or less at the time of applying for ALDEP; the Financial Assistance Policy (FAP) that was aimed at promoting sustainable enterprises with a view of promoting self-employment for the unemployed population. The main target population for the FAP were the medium to large-scale farmers' especially commercial farmers and small-scale entrepreneurs. Then there was the Accelerated Rain-fed Arable Programme (ARAP) for medium sized farmers. Botswana being a country where drought is endemic, the main objective of the programme was to encourage planting during the droughts periods by providing farmers with drought resistant seeds. The programme included subsidies on ploughing, weeding, de-stumping, row planting and water supply. Under this scheme farmers without drought power could hire tractors for ploughing at government expense. These programmes empowered. The Government continues to put in place a number of poverty alleviating programmes, the latest ones being the Chema-chema loan scheme of 2024 for low income entrepreneurs, Thuo and Temo letlotlo of 2024 loans scheme for small scale farmers.

Apart from the mentioned schemes, the government of Botswana has put in place policies and programmes aimed at developing the country as well as improving the lives of Batswana. Among the first such policies were educational policy that aimed at increasing enrolment at all levels of education resulting in human resource development, rural development policy that is aimed at improving the quality of life for people living in rural areas that minimised the need to migrate. The establishment of mines between the periods 1971 and 1991 acted to provide employment opportunities that were lacking in the past. Added to the establishment of mines, were the infrastructural developments that have been taking place also attracted skilled Batswana to stay and find employment in the sector.

6.0 SUMMARY CONCLUSION AND RECOMMENDATIONS

The paper looked at international migration in Botswana with respect to emigrants and immigrants. The paper acknowledges that previous censuses also looked at this topic. In relation to emigrants and immigrants, there have been drastic changes. From being a migration sending country, Botswana is a migrants attracting country. For emigrants the greatest decrease was between 2011 and 2022, this is followed by1971 and 1981 with 62.3 and 59.9 percent respectively. These periods are associated with greatest infrastructural development and mineral discovery. For the immigrants the increased were between1991 and 2001 with an increase of 105.4 percent and 2001 and 2011 with 84.2 percent. This is period on infrastructural development and probably a need for more manpower.

The age and sex composition of emigrants do not suggest any major pattern. However, for the immigrants the distribution seems to support the well documented idea of age and sex selectivity of migration that is said to favour males and young adults. While in the past employment was a dominant reason for emigrating, the 2022 census showed that education dominated as a reason for migrating. In terms of where emigrants go and immigrants come from, the simply word is that it is generally global but with a tendency of attracting immigrants from neighbouring country.

Since Botswana did not have direct policy on migration, it seems the developments that have taken place in the country have acted together to discourage would be emigrants, attract return migrants and immigrants.

RECOMMENDATION

There is need to distinguish among those who are away or in the country for visits among absentees and Non-Batswana.

Since the census used a month as a cut off-point for emigrants, the tabulations should follow similar cut-offs

There is a need for a detailed national migration survey in Botswana to assess migration behaviour of individuals.

The newly adopted migration policy that was adopted during the dissemination of the 2022 census should be disseminated widely especially to all stakeholders.

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1.0 APPENDICE A: DERIVED TABLES

Table 1: Trends of Emigrants and Immigrants in Botswana 1971 – 2022

POPULATION	1971	1981	1991	2001	2011	2022
Batswana	63,000	42,015	38,606	28,210	23,045	8,698
% Decrease		59.9	8.8	36.9	18.3	62.3
Non-Batswana	10,661	15,677	29,557	60,716	111,846	136,637
% Increase		47.1	8.8	105.4	84.2	22.2

TABLE 2: Percent Distribution Of Immigrants And Emigrations By Age And Discussion

AGE GROUP	BATSWANA RESIDENT OUTSIDE THE COUNTRY (EMIGRANTS)			NON-BATSWANA RESIDENT IN BOTSWANA (IMMIGRANTS)		
	MALES	FEMALES	SEX RATIO	MALES	FEMALES	SEX RATIO
<15	7.84	6.511	109.09	16.5	19.06	101.79
15-19	5.66	8.44	60.78	4.99	6.16	97.39
20 – 24	12.72	12.63	91.32	9.44	11.43	99.29
25 – 29	16.72	12.7	118.93	10.79	11.68	111.03
30 -34	11.76	13.81	77.14	11.56	11.24	123.49
35 -39	12.92	12.23	95.7	13	12.14	128.68
40 – 44	10.06	11.84	77.04	11.23	9.43	143.06
45 – 49	7.38	8.37	79.84	8.76	7	150.41
50 – 54	5.2	4.87	97.3	5.99	4.3	167.37
55 – 59	4.23	3.38	113.64	3.49	2.76	151.87
60 – 64	2.78	2.39	105.5	1.99	1.72	139.5
65 +	2.71	2.8	87.5	2.61	3.1	101.06
TOTAL POP	**4,034**	**4,562**	**88.43**	**73,311**	**61,025**	**120.13**

TABLE 3: Immigrants and Emigrants by level of education

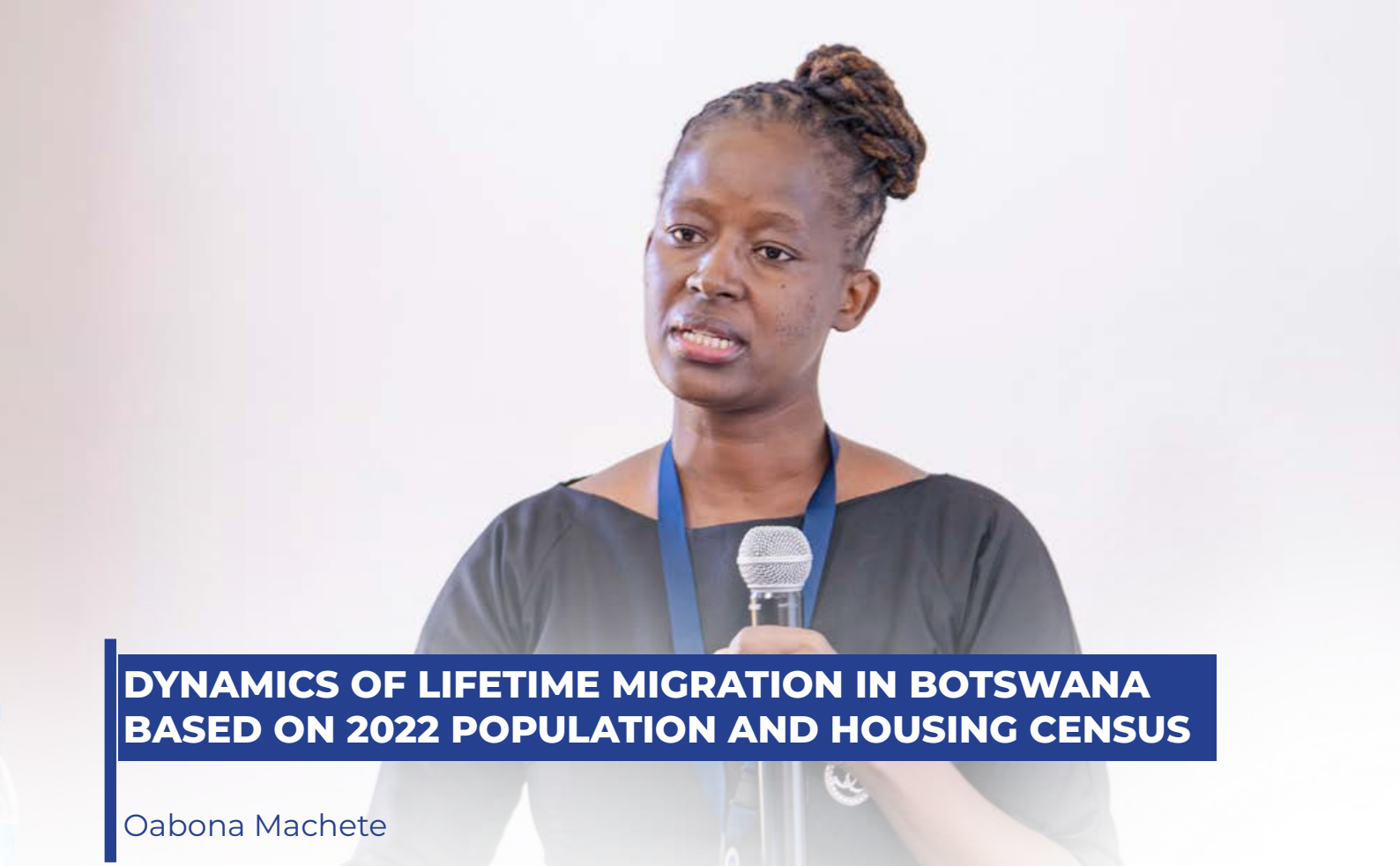
EDUCATIONAL LEVEL	IMMIGRANTS		EMIGRANTS	
Non F	720	0.7	41	0.5
Preschool	2,225	2.0	74	0.9
Primary	21,552	19.8	848	10.6
Junior secondary School	17,184	15.8	1,170	14.7
Senior secondary School	43,038	39.5	1,750	21.9
All certificated	3,071	2.8	198	2.5
All Diplomas	7,227	6.6	597	7.5
Degree or higher	14,051	12.9	3,297	41.3
TOTAL	**109,068**	**100.0**	**7,975**	**100**

Table 4: Emigrants and Immigrants by Country

COUNTRY	EMIGRANTS		IMMIGRANTS	
	NUMBER	%	NUMBER	%
Zimbabwe	543	6.5	85,832	73.1
South Africa	3,413	40.8	6,258	5.3
Zambia	117	1.4	2,488	2.1
DRC	36	0.4	1475	1.3
Lesotho	36	0.4	510	0.4
Tanzania	26	0.3	535	0.5
Eswatini	36	0.4	438	0.4
Namibia	306	3.7	463	0.4
China	151	1.8	1,835	1.6
United Kingdom	863	10.3	613	0.5
USA	402	4.8	407	0.3
Australia	263	3.1	255	0.2
Canada	288	3.4	118	0.1
Germany	73	0.9	207	0.2
Other Countries	1,812	21.7	16,457	14
Not states	27	0.31	19,281	14.1
TOTAL	**8,365**	**100**	**117,356**	**100**

Table 5: Main Reason for Emigrants Being Outside Botswana

REASON	NUMBER	PERCENTAGE
Student	2,771	33.2
Visiting	1,134	13.6
Official Business	438	5.2
Accompanying	253	3.0
Medical	87	1.0
Working Abroad	2,355	28.2
Other	1,293	15.5
Not stated	29	0.3
TOTAL	**8,365**	**100.0**



DYNAMICS OF LIFETIME MIGRATION IN BOTSWANA BASED ON 2022 POPULATION AND HOUSING CENSUS

Oabona Machete

EXECUTIVE SUMMARY

The 2022 Population and Housing Census of Botswana provides a comprehensive overview of the demographic shifts and migration patterns within the country. The key findings are summarized as follows:

Population Overview

- Botswana's population was estimated at **2,359,609** individuals.
- Approximately **722,412** people **(30.6%)** are identified as lifetime migrants. These are individuals whose place of birth differs from their current place of residence.
- This estimated **722,412** lifetime migrants mark a **3.6%** increase compared to the 2011 Population and Housing Census (PHC), which recorded **679,479** lifetime migrants.

Migration Patterns

- The majority of lifetime migrants currently reside in Gaborone District **132,632 (18.4%)** and Kweneng East District **108,220 (15.0%)**.
- The Central Kalahari Game Reserve (CKGR) hosts the fewest lifetime migrants, with only **126** individuals in CKGR being lifetime migrants.
- The Central Districts (Serowe-Palapye, Mahalapye, Bobonong, and Tutume) have experienced significant emigration, resulting in a net negative migration of over **100,000** people.
-

Demographic Characteristics of Lifetime Migrants

- The majority of lifetime migrants are young adults aged **20-39** years.
- Females constitute **51%** of the lifetime migrant population.
- Educational attainment among lifetime migrants is notably higher than that of non-migrants. **28.5%** of lifetime migrants possess tertiary education compared to **8.0%** of non-migrants.
- Lifetime migrants are more likely to have never been married, with **66.9%** falling into this category

From the above findings, Botswana can implement targeted policies that may effectively manage internal migration and thus ensure sustainable development and improved quality of life for all its citizens. These include:

- High volume of lifetime migrants in certain districts necessitates measures to safeguard the wellbeing of migrants and ensuring their access to essential services and equal treatment.
- A need to expand services and infrastructure in high-migration areas to accommodate the growing population and prevent strain on existing resources.
- Development of economic programs and job creation in rural and central districts to reduce out-migration and promote balanced regional development.
- Increase access to higher education and vocational training in rural districts to balance educational disparities and equip the youth with employable skills.
- A need to conduct longitudinal studies and utilize Mobile Positioning Data (MPD) to monitor migration trends and keep subnational population estimates up to date.

Key variables used to identify lifetime migrants in the population are place of birth and current place of usual living now. When these two locations differ, the individual is classified as a lifetime migrant.

INTRODUCTION

Internal migration, the movement of individuals within a country over the span of their lives significantly influences demographic trends, economic landscape and social dynamics. It seeks to reflect paths individuals take to seek better opportunities and have an improved quality of life.

From rural to urban areas, or between regions with varying economic prospects, internal lifetime migration shapes not only the distribution of the population but also the cultural and economic vitality of the nation.

The study of this population provides valuable insights for policymakers seeking to address issues related to regional development, social cohesion and equitable access to opportunities within a country.

Objectives

The objectives of this report is to profile individuals who have engaged in internal migration at some point in their lives and to:

- Analyze their demographics.
- Understand the reasons that drove them to make these moves.
- Explore common migration routes and districts of origin and destination.
- Look at potential policy measures to support and manage lifetime migration.

Definition of main concepts

Counter urbanization – This is when individuals move from urban to rural areas.

Internal Migration – persons who change their place of residence within the country in a given year, with reasons including education, economic improvement, natural disasters, civil disturbance, family, amenity or other socio-economic or political issues.

Lifetime Migration - The “lifetime” migration is defined by relating the place of birth and the place of residence to a reference date. The “life-time” migrant is any individual who resides in an administrative entity other than his or her place of birth.

Migration determinants – This refers to the various factors that influence an individual’s decision to migrate.

Migration Patterns – the movement of people from one place to another over time.

Migration Policy – These are set of regulations established by countries to manage the movement of people.

Migration Streams – Directional flow of migrants between two locations.

Net migration – The difference between the numbers of immigrants and emigrants. A positive figure indicates a net inflow while a negative figure suggests a net outflow.

Pull Factors – factors that attract people to migrate to a specific location.

Push Factors – Negative factors that drive people to leave their district of birth.

Rural – Urban Migration – The movement of people from rural areas to urban areas

Urbanization – An increase in the proportion of people living in towns and cities.

LITERATURE REVIEW

From (United Nations 1971), a person whose area of residence at the census or survey date differs from his area of birth is a lifetime migrant. The number of such persons in a population is commonly referred to as "lifetime migration". This number is however, a gross understatement of both the amount of migration that has occurred during the lifetime of the living population and of the number of persons who have migrated. It excludes all moves that intervened between departure from the area of birth and arrival in the area of residence as reported at the census date, and it does not count as migrants persons who moved away and subsequently returned to their area of birth. Furthermore, it necessarily takes no account of the migration of persons who died before the census date.

Studies have found that significant proportion of the population in major cities are lifetime migrants. (James D. Trevor 1992) states that two thirds of the residents of the major U.S. cities in 1970 were born elsewhere. The major cities in Sub-Saharan Africa were second highest with 60 percent. Asian cities followed with 48 percent of their residents being lifetime migrants and the cities of North Africa were lowest with less than a third. Finally, the native population born and reared in most urban agglomerations will probably comprise larger percentage of the total population in those areas in the future. Should that happen, lifetime migration into major cities will of course decline.

According to the (PHC 2011), lifetime migration in Botswana was estimated at about 697,479 persons. The same was about 520,957 persons using estimates from the 2001 PHC. This shows that between these two census periods, there was a 33.9% (176,522) increase in the number of lifetime migrants.

Internal migration is impacting the population distribution in Africa in important ways, with rural – urban migration and the process of urbanization being its most significant feature (AU Commission 2018). Internal migration is closely linked to urbanization and a country's economic development which can lead to improved living standards and contribute to attaining fast economic growth and poverty reduction (World Bank 2005). People often move to urban centers in search of better job opportunities, higher wages, and improved career prospects. Urban areas typically offer better access to education and healthcare facilities (Tichy, G 2023).

However, if not effectively managed, urbanization can have adverse consequences for migrants and other urban populations alike, by straining the existing urban infrastructure and services (AU Commission 2018).

In terms of labor migration and education, the MPFA (AU Commission 2018) calls for the establishment of regular, transparent, comprehensive and gender-responsive labor migration policies, legislation and structures at national and regional levels to promote the facilitation of free movement of workers as a means of advancing regional integration and development.

Narrowing this to the case of Botswana and looking at the previous censuses, the Crude Migration Intensity (CMI) Bell,. et al. (2002) that measures the overall incidence of internal migration per hundred residents in the past 12 months before each census was conducted has remained high and relatively constant over the past few decades as per the following:

- **9.04** per hundred persons between **1980 – 1981**
- **10.45** per hundred persons between **1990-1991**
- **10.73** per hundred between **2000 – 2001**
- **10.32** person between **2010 -2011**. Song, R., et al. **(2022)**.

Song, R., et al. (2022) continues to state that in Botswana migrants are more likely to move between districts rather than within districts; this propensity, calculated as a ratio (the number of migrants moving between districts relative to the number of migrants moving within districts), increased from 1.25 in 1981 to 2.40 in 2001 and 2011.

Migration Determinants

This refers to various factors that influence an individual's decision to migrate, both within a country (internal migration) and across international borders (international migration). They include:

- Income differentials and income inequality between origin and destination areas, which act as "push" and "pull" factors (Simpson, N. 2022).

- Demographic factors such as age, education, marital status and language proficiency that impact a person's willingness to migrate (Simpson, N. 2022)

- **Age** - Internal migration is an activity undertaken primarily by young adults all over the world (Deshingkar, P., & Grimm, S. 2005). (Hare, D 1999) finds that the age groups of 16-25 and 26-35 are most likely to migrate.

- **Marital Status** - In general, never married men and women are more likely to intend to move than married individuals. De Jong, G. F., & Gubhaju, B. (2013).

- **Education and Literacy level** - Migrants are relatively better off in terms of over-all literacy, school attendance, and educational attainment. Secondary/higher secondary and bachelor/ post graduate constitute a greater proportion for the migrants (more than 50 percent) as a whole. This observation clearly goes in line with the migration literature, which says educated people tend to migrate to avail greater scopes and opportunities. Therefore, education may serve as a 'pull-factor' for individuals to migrate for accessing higher wages, better employment opportunities and higher standard of living, Kabir D.M, Jamil S, Islam N (2016)

- **Employment status** - Some studies show that employment is the main driver of migration followed by education (FAO 2017). Push factors are responsible for pushing one out of his place of origin, they include limited economic opportunity and educational facilities and poor security etc. Pull factors are those that pull people to the place of destination, they include better employment opportunities, better healthcare and educational facilities (Mlambo, V. H. 2018).

- **Distance** – Migrants move mainly over short distances (Lee, E. S. 1966).

METHODOLOGY

Lifetime migration refers to the movement of individuals over their entire lifespan from one place to another. For this manuscript, the geographical boundaries used are the 28 Districts in Botswana.

The data used for this analysis is from the 2022 Population and Housing Census. It was analyzed using SPSS.

Key variables for measuring lifetime migration are:

Place of birth - Typically, place of birth refers to the place of residence of the mother of the individual at the time of the birth.

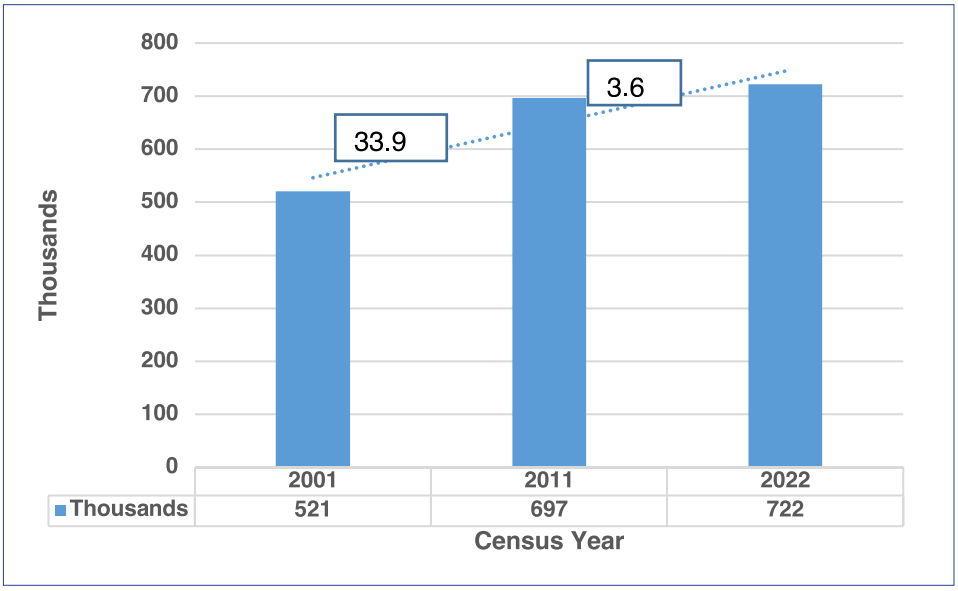
Place of usual living now - The United Nations Statistics Division (2015) defines usual residence for census purposes as the place at which a person lives at the time of the census and has been there for "some time" or intends to stay there for "some time."

Limitation to this data is that there were about 10% cases where either or both the place of birth and place of residence are missing. Results also exclude those born outside the country or those who emigrated outside the country.

Findings and Discussions

Analysis on lifetime migration provides a comprehensive view of population movements over a person's lifetime. Measuring this is valuable for understanding the scale and patterns of internal population mobility within a country.

FIGURE 1: Trend of Lifetime Migrants, 2022 PHC



From the previous two Population and Housing Census, there were about 520,957 lifetime migrants in 2001. The same was 697,479 in 2011. This shows a 33.9% increase in the number of lifetime migrants between 2001 and 2011. From the 2022 PHC, there were 722,412 lifetime migrants which is 3.6% increase compared to the number of lifetime migrants in 2011.

Table 1: Breakdown of the Population, 2022 PHC

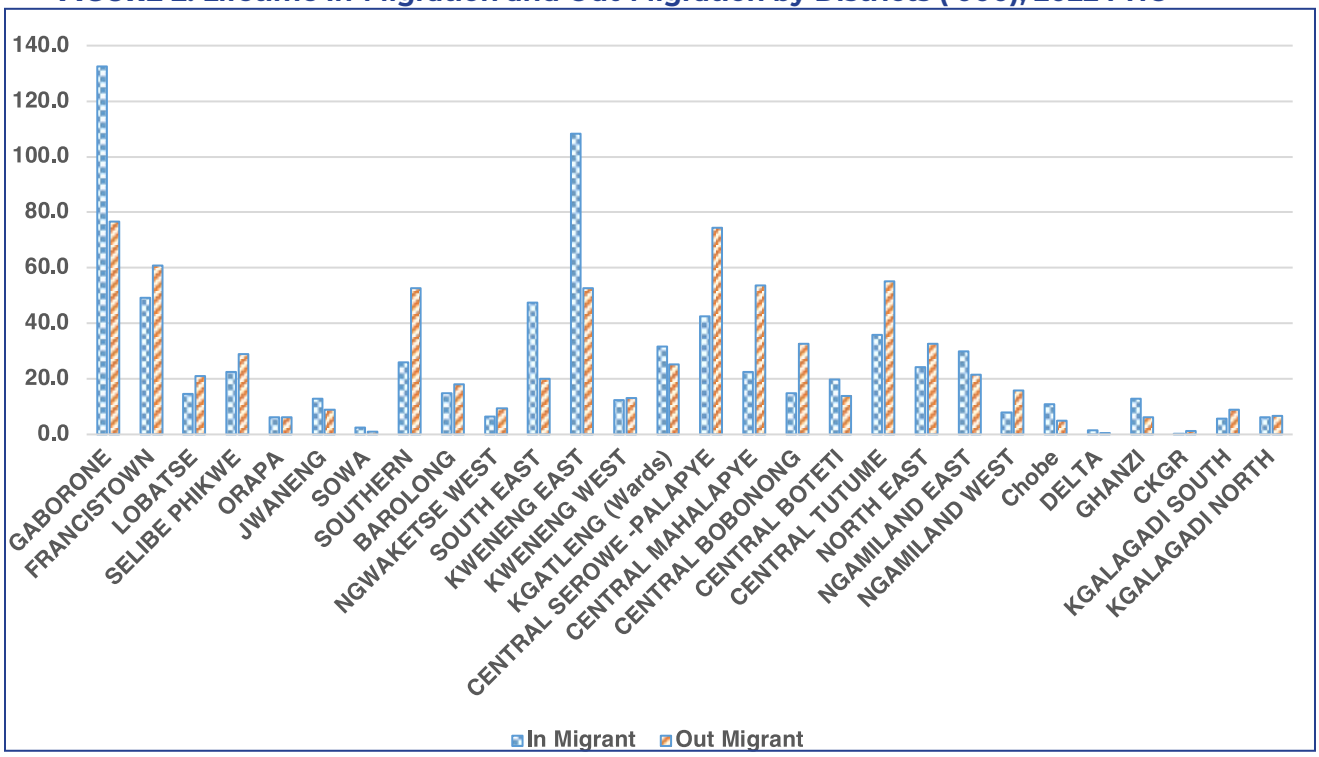
CATEGORY	FREQUENCY	PERCENT
Lifetime Migrants	722,412	30.6
Non Migrants	1,379,780	58.5
Other	257,417	10.9
TOTAL	**2,359,609**	**100.0**

About 30.6% of the 2,359,609 overall population in Botswana are lifetime migrants. Those that have never migrated in their lifetime made 58.5% of the population. We have 10.9% that fall under "Other" category where either or both district of birth and/or current residence is missing or not stated.

Distribution of Lifetime Migrants by Districts:

Over half of lifetime migrants live in districts that are on southern parts of the country. About a quarter are in central districts. The lowest number of lifetime migrants live in Kgalagadi Districts.

FIGURE 2: Lifetime In-Migration and Out-Migration by Districts ('000), 2022 PHC



18.4% of lifetime migrants live in Gaborone district, followed by those who reside in Kweneng East, Francistown and South East at 15.0%, 6.8% and 6.6% respectively. From the 2011 PHC, these four districts were still the highest when it came to where lifetime migrants resided.

Of the 108,220 lifetime migrants who live in Kweneng East, almost a quarter of them were born in Gaborone district which may be a spill district to areas that are in the peripheries of Gaborone District. These are followed by those who were born in Southern District (9.2%) and Central Serowe – Palapye (8.8%)

The district that has the lowest number of lifetime migrants is CKGR with a total of 126. Almost half of these were born in Kweneng West District.

FIGURE 3: Proportion of Lifetime Migrants by District, 2022 PHC

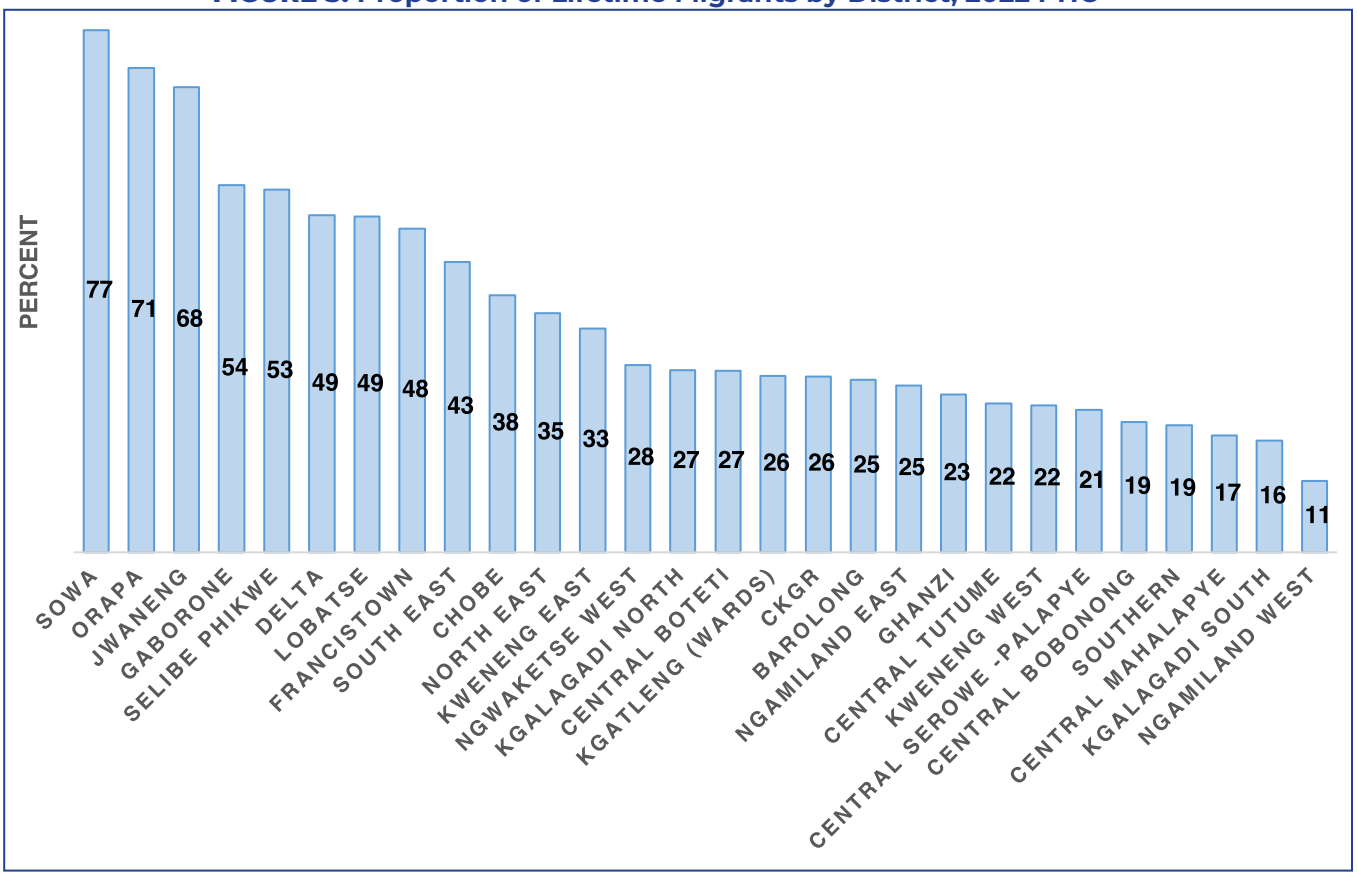


Figure 3 shows the proportion of lifetime migrants in each of the 28 Districts. More than half of the population in mining towns are lifetime migrants. In Central Districts, lifetime migrants make less than a quarter of all inhabitants in those Districts.

The Capital City District:

Gaborone District had a total of 32,632 lifetime migrants. These make over half (54%) of the overall population in Gaborone District.

Most of lifetime migrants in Gaborone District were born in Kweneng East (13.6%) followed by Central Serowe – Palapye (11.8%), Southern (10.6%) and Central Mahalapye (9.9%). From this we see that lifetime migrants are more likely to move to locations closer to their origin.

Almost half of lifetime migrants in Gaborone are aged between 20 – 39 years. A quarter of these have a University Degree or higher. 52.1% of lifetime migrants in Gaborone District are females.

69,187 (52.2%) of lifetime migrants had done some type of work in the past 7 days. Of those who have done some work, 83.9% were employees and 14.7% were self-employed.

From findings above, economic pull, rural-urban migration patterns, large population size and the diverse nature of the capital city contribute to Gaborone district having a higher concentration of lifetime migrants compared to other districts.

Capital cities tend to attract more lifetime migrants due to the availability of economic opportunities and better job prospects.

The downside of this is that an increase in the population will strain the existing urban infrastructure and services. This then calls for strengthening migration policies and strategies. It also calls for improvement in migration data collection and analysis for close monitoring.

Other challenges may include high living costs and tenure insecurity in terms of rental arrangements in residential units as well as workplace insecurity.

Mining Town Districts:

Lifetime migrants make a chunky proportion of population in the mining towns of Sowa, Orapa and Jwaneng. Of the 3,267 people in Sowa, 77% of them are lifetime migrants. Of the 8,648 people in Orapa, 71% of them are lifetime migrants. In Jwaneng, 68% of the 18,785 people were lifetime migrants.

Most of lifetime migrants in Orapa were born in Central Serowe – Palapye followed by those born in Central Boteti. As for Jwaneng, most were born in Southern District followed by Kweneng East. For Sowa most were born in Central Tutume and Central Serowe – Palapye. This shows that migrants are more likely to move to locations closer to their origin.

52.1% of lifetime migrants in mining town are males. Looking at age group distribution over 70% of lifetime migrants in mining towns are aged between 20 – 55 years and most of them did some work in the past seven days.

58.1% of lifetime migrants in the mining towns were working and mainly as employees paid cash.

Mining towns often have strong job markets and better economic prospects compared to other areas. This can act as a pull factor, attracting more migrants seeking employment opportunities, especially the working age population.

From the previous two PHC, Selibe Phikwe was more receiving when it came to lifetime migrants than sending out. Results from the latest PHC show a different picture in Selibe Phikwe now sending out more people than it receives. This could be due to the closing of the Selibe Phikwe Copper mine. The same trend has been observed in Francistown.

Central Districts:

Districts in Central Botswana include Central Boteti, Central Tutume, Central Serowe – Palapye, Central Mahalapye and Central Bobonong.

Of these, Central Boteti is the only that saw a positive net lifetime migration of 6,000 people, probably because it is in the peripheries of Orapa mine. The other 4 saw a negative net migration of over 100,000 people now living in a different district.

Most of the people born in these districts have emigrated to Gaborone, Kweneng East and Francistown. This calls for more analysis into what are the push factors that drive people born in the central districts away.

Net Lifetime Migration:

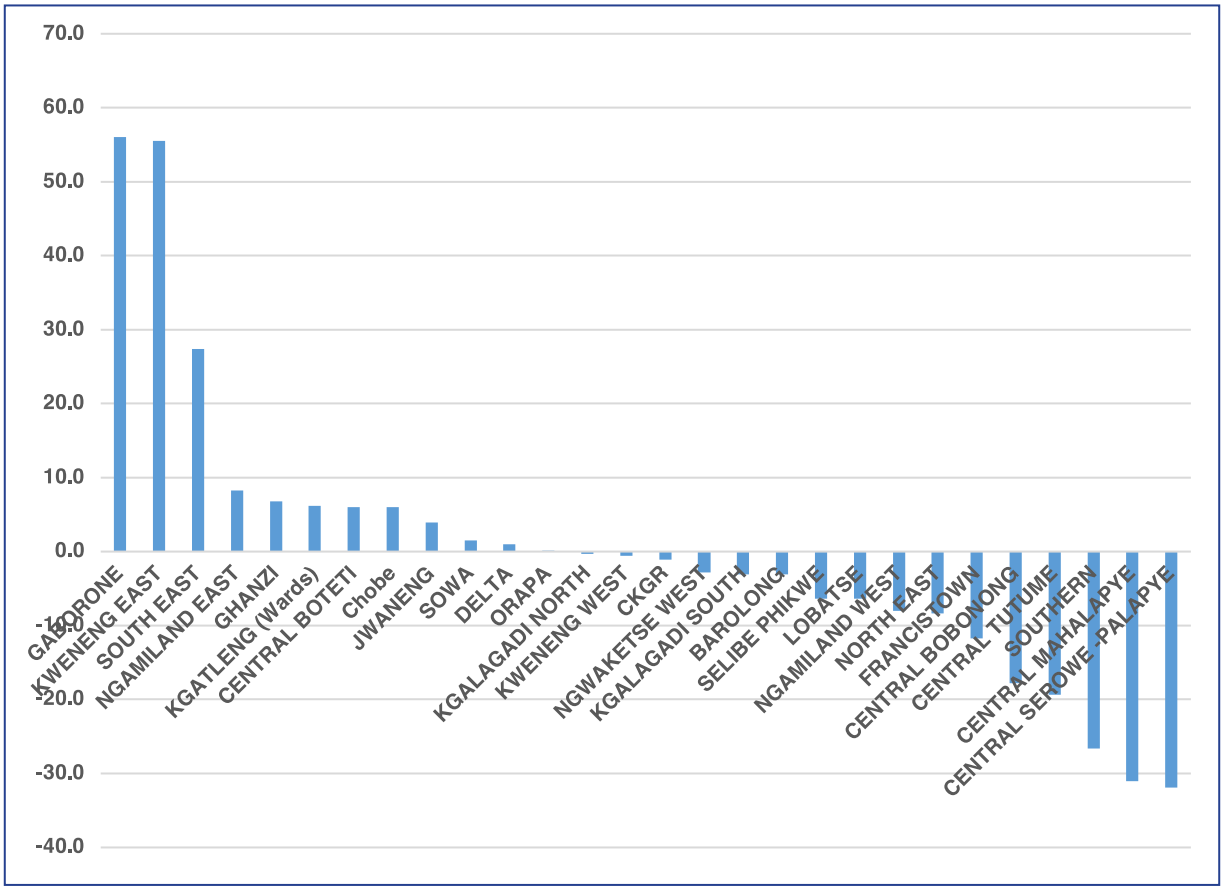
The net migration is the difference between the number of immigrants (people coming into the area) and the number of emigrants (people leaving an area). When the number of immigrants is larger than the number of emigrants, a positive net migration occurs which indicates that more people are entering than leaving the area.

N =I - E

Where

N = Net Migration
I = Number of immigrants entering the area
E = Number of emigrants leaving the area

FIGURE 4: Net Lifetime Migration by Districts ('000), 2022 PHC



Positive Net Migration in Southern Districts

The data suggests that districts in the southern part of the country have a strong pull factor, with most of them experiencing positive net migration. The top three districts with a positive net migration are located in the south, namely Gaborone followed by Kweneng East and South East with a net migration of 56.0 thousand, 55.6 thousand and 27.4 thousand people respectively.

Districts with strong job markets and better economic prospects tend to attract more migrants, resulting in a positive net migration. Additionally, the unique age structure of lifetime migrants, which is predominantly young adults of working age, can contribute to positive net migration as people move to these districts for employment opportunities.

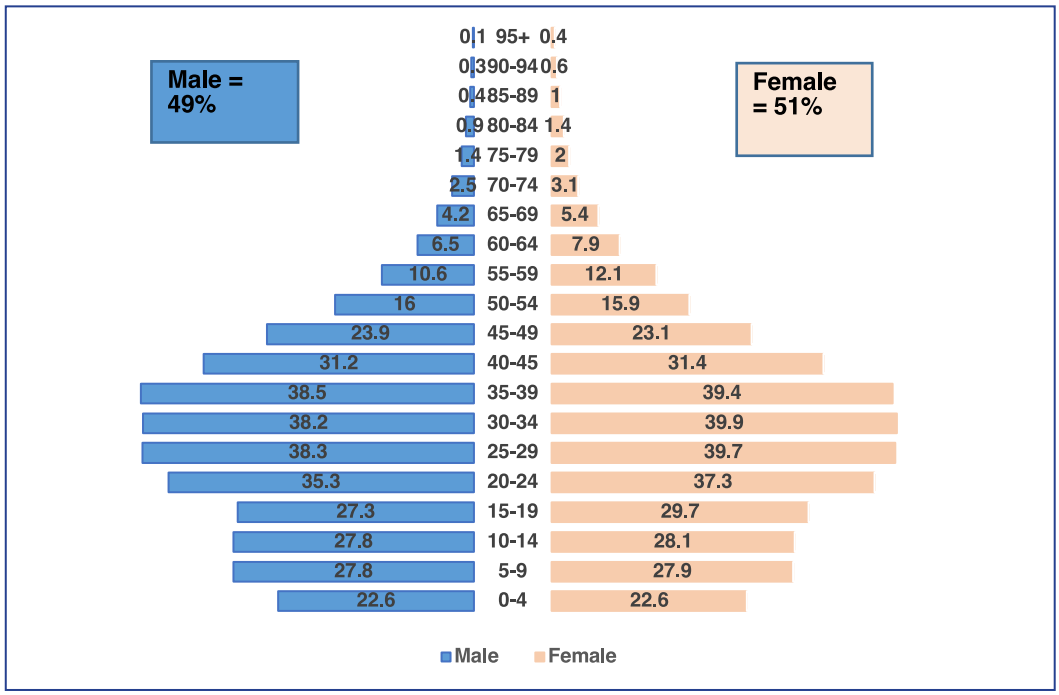
Determinants of Lifetime Migration

This refers to the various factors that influence an individual's decision to migrate. We will look at age, sex, marital status, highest level of education and employment status then discuss their implications for policy makers.

Age

In examining age distribution within the general population, a notable trend emerges. There is a decline in the proportion of individuals as years advance, indicating a typical aging pattern where older age groups constitute a smaller percentage of the population.

FIGURE 5: Percentage Age and Sex Distribution of Lifetime Migrants, 2022 PHC



A distinct pattern is observed among lifetime migrants showing a constrictive pyramid with a higher concentration observed within age range of 20 - 39 years. This unique pattern suggests a higher proportion of lifetime migrants are younger adults, deviating from a typical decline of the population as people age observed in the general population.

This high proportion of lifetime migrants aged 20 – 39 years could be due to various factors such as seeking better educational opportunities, looking for better jobs or responding to economic incentives in destination districts.

Sex

Findings indicate that sex composition of lifetime migrant population is largely similar to that of the non-migrant population. Differences observed are relatively small and do not suggest a striking or significant divergence in the sex distribution between the two populations

Table 2: Sex Proportions for Lifetime Migrants and Non-Migrants, 2022 PHC

SEX	LIFETIME MIGRANTS	NON MIGRANTS
Male	49.0	48.2
Female	51.0	51.8
TOTAL	**100**	**100**

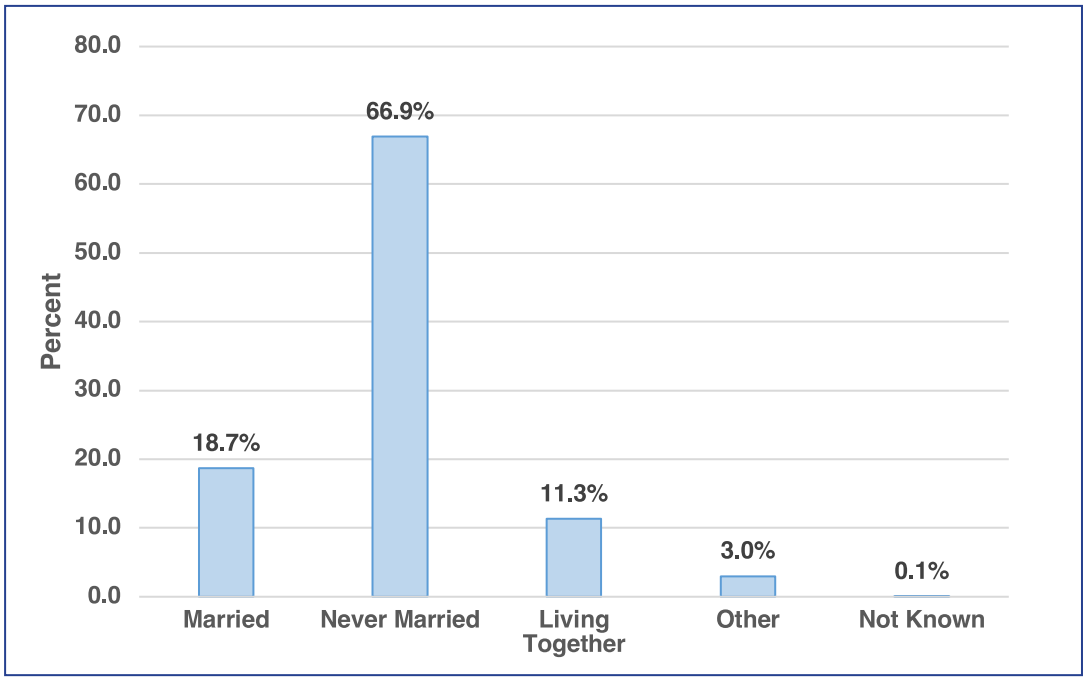
48.2% of the non-migrant population are males while males make 49.0% of the lifetime migrants. This shows that 51.0% of lifetime migrants are females.

In the context of Africa Agenda 2063 and Sustainable Development Goals, the 51.0% of female lifetime migrants signifies progress towards gender balance and inclusivity in lifetime migration patterns. This is also a step towards achieving gender equality by ensuring that women have equal access to migration opportunities. It aligns with the goals of promoting economic growth, gender equality and social inclusion, which falls under the second pillar (Human and Social Development) of the Vision 2036.

Marital Status

Understanding how marital status influences migration decisions and outcomes is crucial for comprehending the dynamics of migration processes.

FIGURE 6: Marital Status Percentages of Lifetime Migrants, 2022 PHC

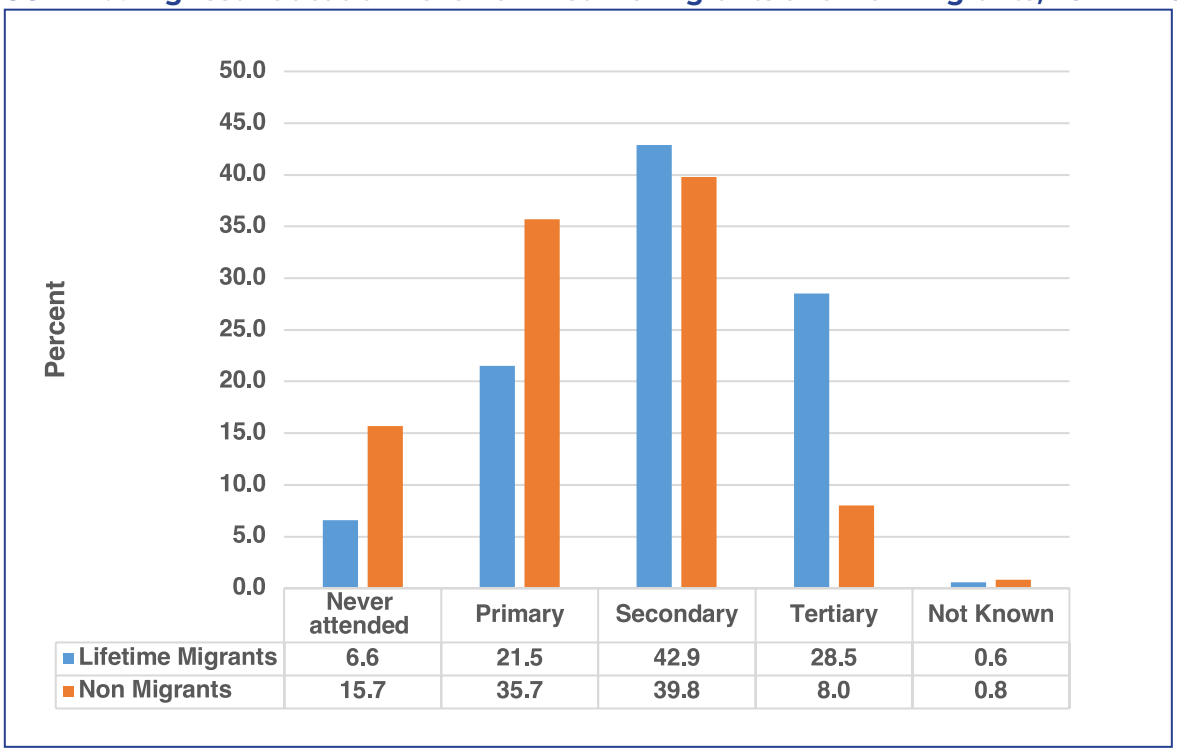


The data suggests that the majority of lifetime migrants (66.9%) have never been married, with smaller proportions being married (18.7%), living together (11.3%) and the 'Other' category which includes the divorced, separated and widowed.

Education

Here we compare educational attainment of individuals who have migrated in their lifetime with those who have not, highlighting any differences in highest educational levels between the two populations.

FIGURE 7: : Highest Education Level for Lifetime Migrants and Non-Migrants, 2022 PHC



	Never attended	Primary	Secondary	Tertiary	Not Known
Lifetime Migrants	6.6	21.5	42.9	28.5	0.6
Non Migrants	15.7	35.7	39.8	8.0	0.8

When it comes to highest level of education for lifetime migrants, we find higher percentages in Secondary (42.9%) and Tertiary (28.5%) compared to non-migrants.

For non-migrants, higher percentages are in Primary (35.7%) and Never attended (15.7%) compared to lifetime migrants.

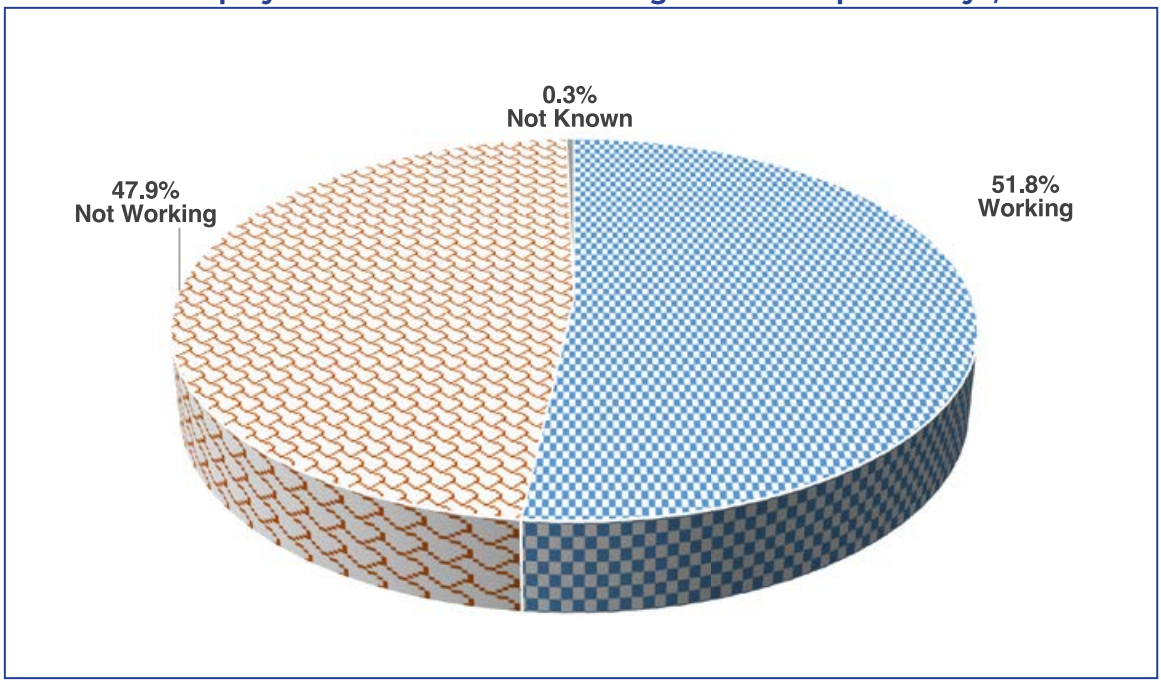
These percentages suggest that lifetime migrants tend to have higher educational attainment in Secondary and Tertiary levels compared to non-migrants who show higher percentages in lower education categories like those who have never attended school and Primary education.

Education level of lifetime migrants align closely with SDG 4 which focuses on quality education and ensures inclusive and equitable quality education for all.

Employment

This is considered one of the main reasons why people move from one location to the other.

FIGURE 8: Employment Status of Lifetime Migrants in the past 7 days, 2022 PHC



The data shows that 309,541 (51.8%) of lifetime migrants reported engaging in work activities within the past 7 days, compared to 38.5% of non-migrants who have done some work in the past 7 days. This underscores the economic participation of lifetime migrants and their active contribution to the workforce. These findings suggest that lifetime migrants are more likely to be involved in work related activities which can be a sign of employment opportunities with the migrant population.

Of the 309,541 lifetime migrants who have done some work in the past 7 days, 83.2% were employees and 13.8% were self-employed. This result shows that employment opportunities are one of the factors that can lead people to move to a different location.

Policy Implications

Agenda 2063 Goal 1 calls for high standard of living and wellbeing for all citizen and its indicative national strategy include policies that will enhance free movement of people and workers. Similarly,

African Union Migration policy framework for Africa (2018 – 2030) provides policy guidelines to African Union member states on managing internal migration, including through labor migration policies, social protection for migrants and cooperation of free movement protocols.

High rates of lifetime migration necessitate policies that support the vulnerable population, protect the people on the move and facilitate safe pathways for migrants. Interventions should promote rights and equal opportunities for all.

SDG 17 which calls for partnership to achieve the goals, can be supported by policies that include all stakeholders in migration governance across all levels of government as well as with non-governmental organization and the private sector. This can ensure a holistic approach to managing migration and addressing its challenges.

Implementation of rural development initiatives that address the root causes of migration, such as lack of economic opportunities, poor infrastructure, and inadequate access to essential services can improve living conditions in rural areas, hence the push factors for migration can be reduced.

Enhancing educational infrastructure and opportunities in rural areas, including the establishment of tertiary education facilities can help retain young adults in rural districts and reduce the need for migration to urban centers.

CONCLUSION AND RECOMMENDATIONS

From key findings, we can conclude that lifetime migrants are mainly young adults seeking better educational and economic opportunities. Most of lifetime migrants reside in districts that in the southern part of the country. Mining towns have a significant population of lifetime migrants, indicating that migration is sustaining these communities and their economies.

Some of the recommendations include:

- It is recommended to utilize longitudinal datasets to analyse individual lifetime mobility so as to provide valuable insights into the complexities of migration patterns over time.
- Understanding characteristics of lifetime migrants can help policymakers develop targeted strategies that will support sustainable growth in Botswana.
- Mobile Positioning Data can be used in monitoring lifetime migrants with up to date results. The positive side of this is that all movements of a person will be captured as opposed to the census data which only compare place of birth and place of current residence.

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APPENDIX 1: Proportion of Lifetime Migrants, 2022 PHC

YEAR	LIFETIME MIGRANTS	POPULATION	PERCENT
2001	520,957	1,680,863	31.0
2011	697,479	2,024,904	34.4
2022	722,412	2,359,609	30.6

APPENDIX 2: District of Residence for Lifetime Migrants, 2022 PHC

A11 DISTRICT OF CURRENT RESIDENCE	FREQUENCY	PERCENT
GABORONE	132,632	18.4
KWENENG EAST	108,220	15.0
FRANCISTOWN	49,167	6.8
SOUTH EAST	47,451	6.6
CENTRAL SEROWE -PALAPYE	42,454	5.9
CENTRAL TUTUME	35,902	5.0
KGATLENG (Wards)	31,553	4.4
NGAMILAND EAST	29,794	4.1
SOUTHERN	25,920	3.6
NORTH EAST	24,317	3.4
SELIBE PHIKWE	22,595	3.1
CENTRAL MAHALAPYE	22,593	3.1
CENTRAL BOTETI	19,866	2.7
BAROLONG	14,910	2.1
CENTRAL BOBONONG	14,832	2.1
LOBATSE	14,653	2.0
GHANZI	12,929	1.8
JWANENG	12,809	1.8
KWENENG WEST	12,415	1.7
CHOBE	10,839	1.5
NGAMILAND WEST	7,801	1.1
NGWAKETSE WEST	6,516	.9
KGALAGADI NORTH	6,266	.9
ORAPA	6,141	.9
KGALAGADI SOUTH	5,780	.8
SOWA	2,503	.3
DELTA	1,428	.2
CKGR	126	.0
TOTAL	**722,412**	**100.0**

APPENDIX 3: Percentage Age Distribution of lifetime migrants and non-migrants, 2022 PHC

AGE GROUPS	LIFETIME MIGRANTS	NON MIGRANTS
0-4	6.3	14.0
5-9	7.7	13.0
10-14	7.7	11.7
15-19	7.9	9.0
20-24	10.1	6.9
25-29	10.8	6.8
30-34	10.8	6.3
35-39	10.8	6.3
40-45	8.7	5.4
45-49	6.5	4.4
50-54	4.4	3.4
55-59	3.1	3.0
60-64	2.0	2.8
65-69	1.3	2.3
70-74	0.8	1.6
75+	1.1	2.9
Unknown	0.0	0.0
TOTAL	100.0	100.0

APPENDIX 4: Proportion of lifetime migrants by district, 2022 PHC

DISTRICT	LIFETIME MIGRANTS	OVERALL POPULATION	% OF LIFETIME MIGRANTS
GABORONE	132,632	246,327	53.8
KWENENG EAST	108,220	330,220	32.8
FRANCISTOWN	49,167	103,416	47.5
SOUTH EAST	47,451	111,447	42.6
CENTRAL SEROWE -PALAPYE	42,454	202,741	20.9
CENTRAL TUTUME	35,902	164,955	21.8
KGATLENG (Wards)	31,553	121,873	25.9
NGAMILAND EAST	29,794	121,396	24.5
SOUTHERN	25,920	139,356	18.6
NORTH EAST	24,317	69,353	35.1
SELIBE PHIKWE	22,595	42,486	53.2
CENTRAL MAHALAPYE	22,593	131,975	17.1
CENTRAL BOTETI	19,866	74,553	26.6
BAROLONG	14,910	58,904	25.3
CENTRAL BOBONONG	14,832	77,504	19.1
LOBATSE	14,653	29,772	49.2
GHANZI	12,929	56,077	23.1
JWANENG	12,809	18,785	68.2
KWENENG WEST	12,415	57,763	21.5
CHOBE	10,839	28,742	37.7
NGAMILAND WEST	7,801	74,151	10.5
NGWAKETSE WEST	6,516	23,663	27.5
KGALAGADI NORTH	6,266	23,512	26.7
ORAPA	6,141	8,648	71.0
KGALAGADI SOUTH	5,780	35,346	16.4
SOWA	2,503	3,267	76.6
DELTA	1,428	2,889	49.4
CKGR	126	488	25.8
TOTAL	**722,412**	**2,359,609**	**30.6**

APPENDIX 5: Net Lifetime Migration, 2022 PHC

DISTRICT	LIFETIME IN-MIGRANTS	LIFETIME OUT-MIGRANTS	NET MIGRATION
GABORONE	132,632	76,629	56,003
KWENENG EAST	108,220	52,659	55,561
FRANCISTOWN	49,167	60,933	-11,766
SOUTH EAST	47,451	20,032	27,419
CENTRAL SEROWE -PALAPYE	42,454	74,329	-31,875
CENTRAL TUTUME	35,902	55,239	-19,337
KGATLENG (Wards)	31,553	25,343	6,210
NGAMILAND EAST	29,794	21,549	8,245
SOUTHERN	25,920	52,571	-26,651
NORTH EAST	24,317	32,696	-8,379
SELIBE PHIKWE	22,595	28,944	-6,349
CENTRAL MAHALAPYE	22,593	53,650	-31,057
CENTRAL BOTETI	19,866	13,855	6,011
BAROLONG	14,910	18,007	-3,097
CENTRAL BOBONONG	14,832	32,666	-17,834
LOBATSE	14,653	21,050	-6,397
GHANZI	12,929	6,164	6,765
JWANENG	12,809	8,845	3,964
KWENENG WEST	12,415	13,022	-607
Chobe	10,839	4,862	5,977
NGAMILAND WEST	7,801	15,776	-7,975
NGWAKETSE WEST	6,516	9,355	-2,839
KGALAGADI NORTH	6,266	6,597	-331
ORAPA	6,141	6,128	13
KGALAGADI SOUTH	5,780	8,870	-3,090
SOWA	2,503	1,010	1,493
DELTA	1,428	442	986
CKGR	126	1,189	-1,063
TOTAL	**722,412**	**722,412**	

APPENDIX 6: Matrix showing Lifetime In-Migration and Out-Migration, 2022 PHC

CURRENT DISTRICT OF USUAL LIVING NOW	DISTRICT OF BIRTH										
	GABORONE	FRANCISTOWN	LOBATSE	SELIBE PHIKWE	ORAPA	JWANENG	SOWA	SOUTHERN	BAROLONG	NGWAKETSE WEST	SOUTH EAST
GABORONE	-	9,561	4,041	4,121	848	1,290	131	14,094	4,590	1,682	5,827
FRANCISTOWN	3,290	-	525	2,315	386	179	122	1,002	271	165	723
LOBATSE	1,150	494	-	219	39	226	8	4,053	2,788	202	704
SELIBE PHIKWE	1,330	1,972	200	-	111	85	12	424	146	94	295
ORAPA	452	601	76	334	-	91	16	155	51	39	142
JWANENG	981	594	392	380	173	-	7	3,321	423	600	390
SOWA	120	264	23	108	11	9	-	69	8	11	27
SOUTHERN	3,755	762	3,826	363	108	2,156	23	-	2,211	876	1,243
BAROLONG	2,005	289	2,604	135	46	268	3	5,013	-	178	617
NGWAKETSE WEST	300	85	186	48	22	1,267	-	1,607	248	-	123
SOUTH EAST	7,618	2,858	2,026	1,433	305	444	31	4,563	1,656	636	-
KWENENG EAST	26,688	6,146	3,048	2,594	421	933	93	9,945	3,068	1,539	4,312
KWENENG WEST	938	304	113	139	19	196	6	613	146	291	347
KGATLENG (Wards)	7,295	2,049	854	966	164	262	18	1,736	666	462	1,481
CENTRAL SEROWE -PALAPYE	5,409	4,819	691	5,371	602	270	97	1,049	343	264	877
CENTRAL MAHALAPYE	3,112	1,641	387	1,341	140	130	32	600	193	129	534
CENTRAL BOBONONG	1,190	1,456	117	3,975	99	66	26	275	86	67	254
CENTRAL BOTETI	957	2,090	184	841	1,811	131	64	378	103	119	235
CENTRAL TUTUME	2,874	11,769	328	1,804	247	124	171	567	169	117	420
NORTH EAST	2,078	7,973	221	1,006	155	115	45	422	90	81	272
NGAMILAND EAST	1,901	2,417	287	637	262	96	44	589	117	123	411
NGAMILAND WEST	280	480	66	132	24	26	12	179	31	27	96
CHOBE	661	1,458	96	312	52	38	24	221	46	44	176
DELTA	11	28	3	6	2	2	-	5	3	3	5
GHANZI	1,117	448	273	158	62	123	13	588	189	300	221
CKGR	3	2	-	2	-	-	-	5	1	1	-
KGALAGADI SOUTH	646	203	235	103	10	205	8	673	225	654	156
KGALAGADI NORTH	468	170	248	101	9	113	4	425	139	651	144
TOTAL	**76,629**	**60,933**	**21,050**	**28,944**	**6,128**	**8,845**	**1,010**	**52,571**	**18,007**	**9,355**	**20,032**
	10.61	**8.43**	**2.91**	**4.01**	**0.85**	**1.22**	**0.14**	**7.28**	**2.49**	**1.29**	**2.77**

APPENDIX 6 CONT'D: Matrix showing Lifetime In-Migration and Out-Migration, 2022 PHC

CURRENT DISTRICT OF USUAL LIVING NOW	DISTRICT OF BIRTH								
	KWENENG EAST	KWENENG WEST	KGATLENG (Wards)	CENTRAL SEROWE -PALAPYE	CENTRAL MAHALAPYE	CENTRAL BOBONONG	CENTRAL BOTETI	CENTRAL TUTUME	NORTH EAST
GABORONE	17,997	2,800	8,455	15,633	13,104	5,291	1,279	9,266	5,460
FRANCISTOWN	1,625	172	1,009	5,928	3,125	3,253	1,275	12,647	8,450
LOBATSE	1,127	107	500	759	657	240	69	361	212
SELIBE PHIKWE	742	97	408	4,871	2,309	5,508	340	1,915	984
ORAPA	232	15	168	1,150	403	287	932	503	189
JWANENG	1,037	271	422	1,020	619	410	211	377	206
SOWA	72	6	57	296	131	132	105	713	211
SOUTHERN	3,589	548	839	1,250	941	428	184	625	429
BAROLONG	1,072	148	370	474	352	180	63	243	141
NGWAKETSE WEST	344	443	73	148	89	54	19	46	46
SOUTH EAST	5,112	677	2,663	4,575	3,936	1,715	572	2,052	1,416
KWENENG EAST	-	5,269	4,644	9,506	8,820	4,101	908	6,565	3,751
KWENENG WEST	6,084	-	360	563	437	207	70	279	175
KGATLENG (Wards)	3,623	636	-	3,211	2,986	1,195	311	1,340	844
CENTRAL SEROWE -PALAPYE	1,983	216	1,188	-	8,391	3,141	1,613	2,851	1,408
CENTRAL MAHALAPYE	1,573	158	1,010	7,717	-	1,082	393	962	551
CENTRAL BOBONONG	589	74	316	2,934	960	-	217	1,082	528
CENTRAL BOTETI	529	122	352	4,146	1,387	911	-	2,166	758
CENTRAL TUTUME	1,066	106	584	3,785	1,484	1,591	1,455	-	4,808
NORTH EAST	742	62	413	1,975	957	1,175	396	5,002	-
NGAMILAND EAST	1,163	122	535	1,934	986	750	2,458	2,502	950
NGAMILAND WEST	250	53	94	467	269	188	300	456	206
CHOBE	419	48	201	831	448	403	280	2,465	608
DELTA	15	1	15	28	6	18	45	52	33
GHANZI	588	217	295	606	485	190	273	438	169
CKGR	10	62	-	6	2	4	2	5	-
KGALAGADI SOUTH	575	109	225	291	220	119	51	168	93
KGALAGADI NORTH	501	483	147	225	146	93	34	158	70
TOTAL	**52,659**	**13,022**	**25,343**	**74,329**	**53,650**	**32,666**	**13,855**	**55,239**	**32,696**
	7.29	**1.80**	**3.51**	**10.29**	**7.43**	**4.52**	**1.92**	**7.65**	**4.53**

APPENDIX 6 CONT'D: Matrix showing Lifetime In-Migration and Out-Migration, 2022 PHC

CURRENT DISTRICT OF USUAL LIVING NOW	DISTRICT OF BIRTH								TOTAL	PERCENT
	NGAMILAND EAST	NGAMILAND WEST	CHOBE	DELTA	GHANZI	CKGR	KGALAGADI SOUTH	KGALAGADI NORTH		
GABORONE	2,757	740	622	10	829	34	1,293	877	**132,632**	**18.4**
FRANCISTOWN	1,343	380	554	12	134	4	143	135	**49,167**	**6.8**
LOBATSE	142	36	26	2	123	1	225	183	**14,653**	**2.0**
SELIBE PHIKWE	318	110	102	-	71	4	85	62	**22,595**	**3.1**
ORAPA	182	34	25	-	20	-	34	10	**6,141**	**0.9**
JWANENG	147	45	44	-	117	2	450	170	**12,809**	**1.8**
SOWA	59	20	29	-	4	-	10	8	**2,503**	**0.3**
SOUTHERN	323	112	70	1	237	-	646	375	**25,920**	**3.6**
BAROLONG	139	39	27	-	94	5	266	139	**14,910**	**2.1**
NGWAKETSE WEST	28	8	6	2	124	2	645	553	**6,516**	**0.9**
SOUTH EAST	1,149	419	248	10	387	6	639	305	**47,451**	**6.6**
KWENENG EAST	1,741	551	455	18	772	18	1,476	838	**108,220**	**15.0**
KWENENG WEST	114	71	28	1	132	359	151	272	**12,415**	**1.7**
KGATLENG (Wards)	473	146	190	8	173	7	291	166	**31,553**	**4.4**
CENTRAL SEROWE -PALAPYE	879	218	259	5	181	11	201	117	**42,454**	**5.9**
CENTRAL MAHALAPYE	335	107	100	-	142	13	122	89	**22,593**	**3.1**
CENTRAL BOBONONG	247	71	79	-	51	1	39	33	**14,832**	**2.1**
CENTRAL BOTETI	1,768	334	124	10	102	77	98	69	**19,866**	**2.7**
CENTRAL TUTUME	1,169	359	596	11	130	1	102	65	**35,902**	**5.0**
NORTH EAST	498	151	290	3	84	-	62	49	**24,317**	**3.4**
NGAMILAND EAST	-	9,099	650	196	1,014	7	333	211	**29,794**	**4.1**
NGAMILAND WEST	3,583	-	163	124	212	1	33	49	**7,801**	**1.1**
CHOBE	1,040	812	-	6	67	2	54	27	**10,839**	**1.5**
DELTA	644	457	27	-	13	-	2	4	**1,428**	**0.2**
GHANZI	2,235	1,362	100	16	-	625	545	1,293	**12,929**	**1.8**
CKGR	3	6	-	-	12	-	-	-	**126**	**0.0**
KGALAGADI SOUTH	103	39	30	2	137	2	-	498	**5,780**	**0.8**
KGALAGADI NORTH	130	50	18	5	802	7	925	-	**6,266**	**0.9**
TOTAL	**21,549**	**15,776**	**4,862**	**442**	**6,164**	**1,189**	**8,870**	**6,597**	**722,412**	**100.0**
	2.98	**2.18**	**0.67**	**0.06**	**0.85**	**0.16**	**1.23**	**0.91**	**100.00**	

URBANISATION

LEVELS AND TRENDS OF URBANISATION IN BOTSWANA

Elizabeth P Mukamaambo

EXECUTIVE SUMMARY

Urbanisation generally refers to the demographic transition of population from being rural to being urban in nature. This may happen as a result of an increase in the number of urban places as has been the case in Botswana or an increase in the size of the population living in urban areas.

The first urban areas in Botswana were established in the 1800s as a result of gold mining in Francistown and the construction of a railway line from South Africa through Botswana when Lobatse became a town in 1897. Then around independence in 1962 Gaborone was purposely built as a capital town of the soon to be independent Botswana. At the time, Gaborone was just one of the railway stations in the country. This resulted in three towns in the country at independence.

Using census data collected during the censuses including the 2022 one, the main objective of this paper was to trace trends and levels of urbanisation in Botswana from 1971 to 2022. Trends focus on the number of urban places in Botswana from 1971 to 2022, while the levels use the proportion of the population living in urban places during the same period. Other indicators of urbanisation as well as demographic characteristics of the population living in urban areas are assessed. Before the assessment, limitations associated with trends and levels of urbanisation in Botswana are highlighted. This is in lieu of data evaluation. The main limitations of the study of trends and levels of urbanisation in Botswana are related to reclassification of some rural areas into urban and possible boundary changes. It is noted that most of the reclassified large villages into urban villages are within 50 kilometre radius of either, Gaborone, Francistown and Lobatse which brings a question of whether these large villages grew as a result of the spill-over of population from the these towns. The findings are that the number of urban areas in Botswana increased from 1971 to 2022. The greatest increase seems to be associated with reclassification of some large villages to urban villages. Associated with an increase in urban places, urban population has also increased. The notable increase in the size of population living in urban areas was recorded during the 1991 when the proportion of the population was recorded to be 45.1 percent, an increase from 17.7 percent recorded in 1981. The sex ratios as well as the age distribution of the population living in urban areas are also provided. The two do not seem to reflect the well documented expectation of male dominance among urban populations as well as the expectation that urban areas are dominated by a younger population. The paper notes that while there are policy documents referring to urban areas, the documents are not clear on the specific plan of action for urban areas. The paper concludes by among other recommendations that there is need for a well-documented (gazetted) definition of what constitutes rural and urban areas. This is because time and time again programmes refer to provision of services in rural areas. There is also need for a comprehensive study to assess the main factors associated with urbanisation in Botswana given that should the commuting populations relocate to their nearest town, the reclassified village would revert to the original status of being rural.

Due to reclassification of some large villages and the establishment of mining towns, the number of towns has increased to 66 in 2022. In terms of the proportion of population in urban areas, at 66.6 percent, the level of urbanisation in Botswana is high by African standards which are estimated by the UN to be 45 percent and world standard of 57.4 percent.

1.0 INTRODUCTION

There is no standard definition across countries of what should be considered an urban area. Most countries use both the population size and the function of the area to define what should constitute an urban area. The functional definition of an urban area is associated with the use value of a locality, for example some countries take all provincial and district centres as urban regardless of the physical arrangement or population size of the area. Areas that are of special economic interest may also be classified as urban. These localities may be tourist centres like Ghanzi, Kasane and Maun in Botswana and many others including mining areas, that is using an administrative decision. Then, there is another definition of an urban area that uses population size. In this regard, population sizes together with the percentage of labour force involved in non-traditional agriculture are used to determine whether an area qualifies to be regarded as urban area or not. As with the definition of urbanisation, population sizes required for an area to be considered urban vary, for example Lewis et al, (2020) provided some population sizes used by some countries as follows: Denmark (200), 5,000 (Botswana and India), 50,00 (Japan) and 100,00 (China).

Population increases of urban areas in Botswana has been attributed to four major factors as is the case elsewhere in the world.. These are the natural increase as a result of the differences between fertility and mortality rates; rural to urban migration, reclassification of some rural areas into urban areas once they attained urban status according to the country's definition of an urban area, as well as changes in the boundaries of localities, where urban areas boundaries encroach the rural areas or the previously uninhabited urban land become occupied. This chapter looks at trends in urbanisation as reflected by the population sizes of both rural and urban areas, in particular size of urban areas relative to the size of population in rural areas, the age and sex composition of both. The trends of urbanisation in Botswana are traced through the changes in the number or urban places, while levels use the proportion of population living in areas considered to be urban from 1971 to 2022 according to the census reports. The uses of age and sex composition are aimed at assessing whether or not there is a potential for further growth in the urban areas. The age structure in particular can be used to assess the potential of population growth in urban places through births.

According to the past censuses the size of population living in areas considered urban has been growing steadily since that landmark census of 1971, the first complete census enumeration in the country. Even though there were censuses before 1971, their completeness is such that it is impossible to use them for comparability purposes. As a result of this major flaw associated with censuses before 1971, in acssessing trends, the paper focuses on the data collected from the censuses of 1971, 1981, 1991, 2001, 2011 and 2022, a period of fifty years. Apart from looking at the potential contributions of the factors mentioned above to the process of urbanisation, the paper assesses how the Government's development efforts to ensure a balanced rural and urban growth since 1971 have contributed to the observed growth and trends.

In order to fulfil the requirements of the objectives, data from different censuses are analysed to determine levels and trends. The increase in the number of urban areas is also used to assess the impact of reclassification of areas from being rural to being urban over the years. Apart from the literature, Botswana policy documents are used to discuss the observed situation such as rural development plans, different NDPs, Visions 2016, Agenda 2030 and Agenda 2063. The impact of Vision 2036 is yet to be properly assessed in relation to further changes in urban processes, though as was the Vision 2016, it also focuses on "prosperity for all".

It is important from the onset to mention that a paper on urbanisation has been a common feature in all previous census analytical reports, with varying focuses, for example the past analysis focused more on the geographical distribution while the current paper focuses on the demographic issues. As results, to some extent, this paper builds on what has been done before. The main limitation of information on urbanisation especially trends is associated with both reclassification of some rural areas into urban areas as well as boundary changes. While the two may be related to development, they may result in areas changing status from being rural to becoming urban without appreciable socio-economic changes for the lives majority of the people living in these areas, especially infrastructural development as one of the indicators of urban, 75 percent of labour force being involved in non-subsistence agriculture

is not enough given that it does not specify where they should be employed. The paper is arranged as follows: Introduction, Objectives, Definitions, Literature review, Methodology; Limitation of data, Findings and discussions, Government interventions, Relationship of urbanisation in Botswana to both national and international pronouncements, and Summary, conclusions and Recommendations.

1.1 Objectives

The main objectives of this paper are to trace trends of urbanisation in Botswana from 1971 to 2022. Specifically the paper does the following:

- Discuss major factors associated with urban growth in Botswana
- Establish some indicators associated with urbanisation in Botswana
- Assesses urban population composition in Botswana in 2022
- Discusses the likely problems of urbanisation in Botswana
- Discusses the efforts made by government to ensure a balanced rural and urban development focusing on policies and programmes in place for both rural and urban
- Relate urbanisation in Botswana to both national and international pronouncements.

1.2 Definitions

Large Villages: Any Village with a population of 5,000 or more is regarded as large village in 1981 (Central Statistics Office, 1987). This definition still pertains.

Population growth Rate: The number of people added or subtracted from a population within a year due to natural increase (balance on births and deaths) and net migration expressed as a percentage of the population at the beginning of year.

Urban: The definition of urban areas differs in space. Different countries use different population sizes. Botswana uses both geographic concentration of population and a percentage of labour force involved in non-traditional agricultural activities. The population size used is 5,000 persons and 75% of labour forces being involved in non-traditional agricultural activities. At times these are referred to as “urban settlement or urban villages” Also, any settlement that has been declared urban administratively. Usually the predominant activity in urban areas is non-agriculture

Urbanisation: The process leading to increase in the proportion of people living urban areas according to a well-specified definition of what constitutes an urban area. The process includes an increase in numerical number of areas considered urban which in turn are associated with the increase in the urban population size. Or a rise in the proportion of population concentrated in urban areas (Overbeek, 1980)

Level of urbanisation: The proportion the population living or residing in areas considered as urban to the total population of a locality.

Local move: Change of residence within the same area without crossing administrative boundaries

Rate of urbanisation: The rate at which urban population size is growing.

Towns: A built-in geographical area on state land and/or gazetted as urban.

Urban-rural growth differential (urban growth Index}: The difference between urban and rural areas growth rates

Rural Urban Linkages (Linkage indicators): Rural Population per number of urban areas (the number of rural population served by urban areas); the lower the indicator the higher the linkages.

Urban density: The number of urban areas per 1000 square kilometres of the total land area of a country (581730 square kilometres in case of Botswana)

2. LITERATURE REVIEW

Over the years, urban centres have played an important role in cultural change and civilisation processes. According to Africa Deployment Bank (ADB), urbanisation is one of the profound transformations that the African continent will undergo in the 21st century. According to the report, the number of urban areas is expected to double and the cumulative population size will also increase by over 500 million people. Accordingly, this accelerated growth of urban areas will pose challenges in planning, managing and financing urban growth. The idea of rapid urbanisation in Africa was also supported by Saifaddin Galal (2023) who indicated that the population living in urban areas has increased from an average of 35 percent in 2000. He pointed out that not all countries in Africa have experienced the same level of urban growth. Countries such as Gabon, Libya and Sao Tome had the highest proportion of urban population with over 80 percent of their populations living in areas classified as urban. In this regard, Botswana seems not to be too far behind with 66.6 percent of the population in urban areas in 2022. Proportion of the population in urban areas for Botswana is the highest among the two trading blocs Botswana belongs to of SADC and the Southern African Common Custom Area with countries of Eswatini, Lesotho, Namibia and South Africa.

For Heinrigs (2020) Africa is undergoing unprecedented urbanisation, though the causes driving the trends are poorly understood mainly because of lack of common definition of what constitutes an urban area and unreliable demographic data. For ECA (2022) urbanisation has a positive economic benefit for Africa as it contributed approximately 30 percent of per capita gross domestic growth across Africa. From the 2001 and 2011 Census Gwebu (2003) indicated that reclassification has been a major factor in the process of urbanisation in Botswana. He further stated in 2013 that the existence of rural to urban migration can be explained by reclassification of some rural areas into urban areas. For Merceadalli et al (2023), rural to urban migration has played a very small part in urban population growth. The 2003 Country Profile Report that was a follow-up to the ICPD 1994 stated that the rapid urbanisation in Botswana is a post-independence phenomenon. It indicated that the development of urban areas in the country can be traced to 1880s as a result of early mining in Francistown and the construction of the railway line from South Africa through Lobatse in 1860. Then, Gaborone as a town was purposely built in 1962 as a capital, resulting in three urban areas at independence and a population proportion of three percent. The three urban areas were followed up by the mushrooming of mining towns of Selebi Phikwe, Orapa, Jwaneng and Sowa Town. Though report stated that urbanisation in recent years occurred mainly through the thickening of rural areas rather than an increase in population size in these areas per se.

3.0 METHODOLOGY

The paper uses the census data collected from 1971 to 2022 to assess trends and levels in both the number of urban areas as well as the population size recorded in the urban areas during the six censuses of Botswana. Levels of urbanisation are measured through the percentages of urban population. Trends are measured using changes in the number of urban places from one census period to the next. To appreciate the levels of the population size in urban areas, the rural areas population is also focused on where appropriate. While the official records differentiates between towns and urban areas, the former being areas that have been administratively declared towns regardless of the population size, the latter being used when referring to the areas that qualify to be urban based of the definition that uses the population size of 5,000 or more and 75 percent of the labour force engaged in non-subsistence agricultural activities, this paper uses urban to refer to both towns and urban villages.

Measures that are used are percentages and indices. Indices used are urban density, number of rural population served by urban centres to show the rural-urban linkages are used. The rural - urban growth index is calculated using simple arithmetic growth rate as an indicator of growth as indicated for example in Haupt A and Kane T. T. (1998). The age and sex composition of urban populations are used to assess whether or not urban population has in-build potential to grow without further reclassification. Age structure is an important indicator of a propensity of population growth.

Apart from looking at the contributions of the factors mentioned above that are associated with urbanisation, the paper assess how the Government's efforts to ensure a balanced rural and urban

development since 1971 may have contributed to the observed urban population growth and trends. It is well known that the economic situation of the Botswana during the earlier censuses was such that even though there could have been a will by government to do more, there were no financial resources to do much as the country was one of the poorest counties in Africa. The paper does not claim originality; it builds on what has been done before but focusing more on the demographics of the urban population rather than the geographical aspects as was the case for previous papers.

3.1 Limitation of Data

Even though this analysis is being made, the author is mindful of the following limitations:

i. The main limitation of information on urbanisation especially trends is associated with both reclassification of areas into urban areas as well as boundary changes. As already mentioned before, while the two may be associated with development, they pose measurement problems in that the focus is not on a closed areas but on an area with unpredicted boundaries similar to what Mukamaambo (2002) defines as

ii. "boundaries without borders" when discussing a household, or one can say an urban areas are boundaries without borders, given potential boundary changes as well as reclassifications of areas into urban areas.

iii. Most of the reclassified large urban villages are within 50 kilometre radius of Gaborone, Francistown or Lobatse which brings in a question of whether these large villages grew as a result of the spill-over of population from the said towns, given a possible shortage of housing in the mentioned areas. For example, in the case of Gaborone, traffic volumes in the mornings and evenings on the roads from Mochudi, Molepolole, Gabane, Ramotswa and Tlokweng point to this possibility. Similar volumes exist for roads associated with Lobatse and Francistown.

iv. It is not easy to calculate the pattern of urban growth where differential growth rates between areas can be associated with reclassification. The can only be calculated for the seven areas of Gaborone, Lobatse, Francistown Selebi-Phikwe, Orapa, Jwaneng and Sowa, but not including those that have been reclassified from rural to urban.

v. The definition of what constitutes an urban area using a percentage of the labour force employed in non-subsistence agricultural activities does not specify where the labour force is employed. This could give a false indication of possible employment opportunities in these areas, when in fact most commute to the nearest town (See iii above)

vi. Lastly, but most importantly, when those reclassified as urban stop being housing reserves to the nearest town, and the percentage of labour force engaged in non-agricultural activities falls below 75%, will they revert to being rural areas.

4.0 FINDING AND DISCUSSIONS

The recent urban population growth in Botswana can be traced to the period before independence in 1962 mainly as a result of rural to urban migration to take advantage of employment opportunities that opened up mainly in the construction sector as Gaborone was being established as the capital town of the soon to be independent Botswana. The rural to urban migration continued as a result of discoveries of minerals that resulted in a need for labour in the mines. At the time Lobatse and Francistown were already recognised as urban areas, the former, as a result of the railway line that passed through there in 1860 and the later as a result of gold mining activities in the area that started in 1880s. The level of fertility at the time may not have played a part in the past, as according to estimates of fertility during different censuses, the national level fertility were recorded as 6.5, 6.6, 4.2, 3.3 to 2.8 for 1971, 1981,1991, 2001 and 2011 respectively (Letamo and Bainame, 2013). It is expected that the levels of fertility in urban areas decreased more than the decreases in fertility at the national levels. This implies that natural increase may have contributed a very small proportion in urban population

increase. Furthermore, over the years there been increases in the physical number of urban places either as a result of the establishment of new mining areas as well as reclassification of some rural areas into urban areas, the reclassifications resulted in the whole populations changing status from being rural to being urban without changing residences, an interesting occurrence that brings about complicated policy issues.

Table 1 shows that a major contributor to urban growth in Botswana has been the "swelling" of the countryside rather than the growth of the established ones. The table shows the number of urban places in Botswana from that benchmark census of 1971 to the latest census of 2022 together with associated urban populations. According the past censuses, the number of urban areas in Botswana increased steadily from one census period to the next during the reference period. In 1971 there were only five urban centres, all of which were administratively declared. These were Gaborone, Francistown, Lobatse, Selebi Phikwe and Orapa. By the next census, this number increased to eight. Apart from the original five towns, three more were added. The three included the two mining towns of Jwaneng and Sowa Town, and, for the first time one large village, Tlokweng qualified to be regarded as an urban area using Botswana definition of urban area, bringing the number to eight. The greatest increase in the number of areas classifies as urban was between 2001 and 2011 where an additional 22 rural areas were reclassified to be urban. This increase in the number of urban areas was followed the increase between 1981 and 1991 where there was an additional 17 urban areas from the original eight (8) in 1981.

Apart from an increase in the number of urban places, Botswana experienced an unpreceded increase in the size of urban population since that landmark census of 1971, and a shrinking rural population. In terms of proportion of population living in urban areas, the table shows that in line with the increase in the number of urban places, the proportion of population enumerated in urban areas also increased from one year census to the next. The highest proportionate increase was between 1981 and 1991. This period in the population increase does not seem to be associated with the numerical increase of urban places which occurred between 2001 and 2011. Specifically the Table shows the following:

- There does not seem to be evidence that established towns have grown at the expense of the newly classified urban areas, if anything the reverse seems to be the case.
- The percentage increase of the urban population from one year to the next is much higher than percentage increases for rural areas as well as at the national level.
- While fertility could have played some part in the increase, existing evidence from past estimates shows that fertility in the country has been declining at a very fast rate. For example, Letamo and Bainame (2013) showed that the nation fertility level were 6.5, 6.6, 4.2, 3.3 and 2.8 for 1971, 1981, 1991, 2001 1nd 2011 respectively. Fertility rates in urban areas are generally lower than the national averages for each census estimate. This therefore implies fertility may not have played a major part in the overall increase in urban population
- The other possible reason can be an increase rural to urban migration discussed in some other paper; also the reclassification invariably implies the whole locality migrating to being urban without the population physically changing residences.
- There has also been an increase in the number of occupied urban spaces which were previously unpopulated. Among such places are the following, Gaborone North, Phakalane, and Blocks 6, 7, 8, 10 and Tsholefelo extension became gradually occupied since 2001. In most cases, this has been a result of local moves rather than migration per se.

4.1 Some indicators associated with urbanisation in Botswana

Table 2 shows the following:

- **Urban Density:** As indicated in the definition section concepts of this paper, the index shows the relationship between the land areas of a country per 1000 number of urban areas. From the table, even though Botswana is urbanising fast and has a large number of urban areas a reclassified, the relationship is very low. Implying that few urban areas serve the whole of Botswana. Even with an increase in the number of urban places these indices are very low. It was lowest during the first two censuses but improve especially

in 2022, though still low. The low level of this index is not surprising given that even the general population density in Botswana is very low, estimated at roughly 4.1 persons per square kilometres in 2022. However, whether the low index is a good or bad thing is a subject of another discussion.

- **Urban-Rural linkages**: In relation to the number of rural population served by urban areas the table shows that during the first two censuses of the reference period, the linkages were extremely high, but decreased with the passage of time. According to the usage of the index, this shows that the urban population has also been growing fast. This implies high linkages.

- **Urban-Rural Growth index: I**n relation to the difference between urban and rural areas growth rates, the first observation is that the growth rates of rural areas are generally very low compared to the growth rate of urban areas. In some cases the rural population growth rates are negative. Even though differential enumeration coverage may explain part of the fluctuations, the main factor can be that of reclassifications, where the whole rural locality becomes a urban area taking with it the population that was previously classified as rural.

4.2 Demographics Urban Population in Botswana in 2022

Population composition refers to the basic demographic features by which a population may be described. The age and sex are the basic characteristics of any population. They are directly related to the levels of fertility and mortality as well as having an impact on population increase and distributions. The composition itself is affected by the levels of fertility, mortality and migration, the dynamics of population growth (not covered in this paper). This section deals with age and sex composition of the urban and rural population in 2022 with related measures of sex ratio, percentage of population at each age group as well as dependency ratios. Table 3 shows the age and sex distribution of the population in towns, urban and rural areas.

4.2.1 Sex distribution in urban areas

Sex ratio of urban areas: With the total male population in urban areas enumerated as 749,934 and female population being 819,996 the resultant sex ratio in urban areas in 2022 was 91.5 males per 100 females. In comparison the sex ratio in rural was 103 males per 100 females. The two figures are at variant with the theories on sex selectivity of migration to urban area which is said to favour males. For towns and urban areas the sex ratios are generally lower than expected for urban areas. The table 3 also shows Sex ratio of the population at each age group. For rural areas the sex ratio favour males as the ratio is consistently above 100 for almost all ages. Then from age group 50 -54, the sex ratio declines. That could be a result of selective mortality. However, with what has been indicated in the previous sections that Botswana population growth in urban areas can hardly be explained by migration and natural increase, but by reclassification of areas, the figure can be justified that it is not surprising that sex rations do not reflect the sex selectivity indicated in the literature. The selectivity in historical perspective starts with sex selectivity of migration. As migration seems not to have played a major part in urbanisation, the element of selectivity is missing

4.2.2 Age Structure

The age structure of any population is affected by changes in the demographic of the population in the past. Ideally if the demographic behaviour of the population remains unchanged for a considerable length of time, the overall age structure remains relatively unchanged or may show a slight change. The structure is also affected by mortality and migration. The tables 3 and 4 provide five year ages groups for towns urban areas and rural areas. Table 4 combines both towns and urban areas to come up with a single column of urban. The entries for rural areas remain the same. The tables show slightly more children under the age of 15 for rural areas than in urban areas. Then for those in the working age groups 15-64 years of age, the proportion for urban areas at each age is higher than in rural areas.

Basically the following are evident:

- The table shows that at younger ages (under age 15), the proportion is large for all the areas; However, the largest proportion in this group is found in rural areas. For both males and females

- Then proportion of those above the age of 65 years is also high for those in rural areas but for towns and other urban areas the proportion is almost the same, very low.

- Towns and urban areas also tend to have higher percentages of people expected to be in the labour force, those aged 15-64. This may be explained by selectivity of migration (not discussed in this paper)

- **Dependency ratio:** The number of those considered to be depended to 100 of those expected to be in the labour force. The lower the ratio, the easier it is for the active population to support the inactive population, the higher the ratio the heavier the burden of support. To appreciate the urban ratio, the rural ratio is provided. The table shows that for urban areas the ratio is 51.5 compared to 74.6 for the rural areas. This implies that for both areas, the 100 persons in the working age group ideally support less that 100 of those in the dependent age groups.

The age structure of the urban population does not seem to have an inbuilt ability to grow, as those below the ages of 15 are fewer.

4.3 Problems of Urbanisation Classifications in Botswana

Even though the discussions above focus on population situations in Botswana, there are few problems related to urbanisation in Botswana, According to United Nations Manual VIII (1974), urban areas can remain within constant geographic boundaries, and the urban population so defined can only grow through births, deaths and migration. In other situations as the case with Botswana, the geographical areas of urban can expand continuously. The expansion is mainly related to reclassification of some rural areas. The other problem is that definition of what is considered to be urban areas varies from one country to the next and within the same country it can vary from one period to the next. Then within the same country two or more definition can be used side by side. This is the case with Botswana where some areas are referred to as towns implying areas with municipalities, Then others are referred to as urban, referring to urban villages. In the analysis both these areas are considered urban, then others can be referred to as township such as Ghanzi and Kasane. Then the use of a percentage of labour force involves in non-agricultural activities give an added complexity as it does not state where the said population should be employed. The other problem is that of classification of a settlement which is officially designated jointly by tribal administration, district administration and district council as a village is considered urban. According to these offices, a village is usually typified by the presence of tribal authority, availability of schools, clinics tribal administrative offices, Botswana police offices etc. (CSO, 2001). To this effect, all the so called urban villages may only be seen as urban by Census office and not officially recognised as such by the authorities mentioned. At times, there are pronouncements of creating employment in rural areas to limit individuals from commuting to urban areas in search of employment. One such call is for decentralisation of both public and private sector activities.

5.0 GOVERNMENT INTERVENTIONS

It has been alluded and evidenced from data collected at different parts of the world that in the past the cause of rapid urbanisation was rural to urban migration as a result of urban bright lights", which are the many attractions provided by urban areas as compared to rural areas. Among the attractions being better employment opportunities, housing, health and many other amenities. With this realisation, many governments have put in place either direct or indirect measures to control differential growth among settlements. The main direct controlling method in some countries is to influence the population size of settlements. In this regard, population movements in and out of settlements are monitored. Some

governments use indirect methods to minimise the rate at which people move to urban areas by trying to ensure a balanced rural and urban development. This is done by making rural areas as attractive as urban ones, by ensuring that the basic amenities found in urban areas are also found in rural areas. These indirect measures include rural electrification, provision of clean water, making sure that health facilities are available and assessable in rural areas. That has been the main constraint in rural development. The government of Botswana seems to have opted for the indirect method of controlling rural to urban migration control. To address the urban and rural differentials in development, the Botswana government has over the years invested more on poverty deduction programmes in rural areas. In addition to poverty reduction, the programmes are aimed at employment creation. Among the rural areas programmes are the following arable land development, accelerated rain fed arable land production, financial assistance programmes through the establishment of CEDA and LEA. These are aimed at employment creation in rural areas. The government has also invested a lot in both social and physical infrastructures. Among the social infrastructure are the following, provision of basic education where enrolment at primary level is almost 100 percent, access to secondary education has also greatly improved. To make sure that pupils have no excuse for not attending schools; the government has also put in place school feeding programmes. The country's health system has also improved greatly where almost all persons live within less than 15 kilometre radius of a health facility. This is still not enough as evidenced by the number of day-time commuters to towns for employment purposes.

Other improvements have been in road infrastructure, where all urban areas are connected by relatively good roads road system, electricity, water supply, shopping malls to mention just a few have been established in all district centres. These have acted together to improve not only urban areas but also rural areas. The government has also made sure that housing is available in rural areas by putting in place enable condition for housing in these areas. One method of making sure that people in rural areas have decent housing has been through the provision of free residential plots in rural areas and encouraging flexible loans for housing such as the SHHA that affords flexible housing loans for low income Batswana. While the scheme was initially for low income urban population, it has been extended to large urban villages. Given that main focus by the government has been on poverty eradication, the target of various national development plans has been to elimination of rural poverty. The result of these has been unprecedented thickening of large villages making Botswana one of the most urbanised countries in the region. All these activities are grounded on the country's development plans, and other forward looking pronouncements the government has made to improve the standard of living of the people. These include, various development plans, Population policy and the Vision documents.

6.0 RELATIONSHIP OF URBANISATION IN BOTSWANA TO BOTH NATIONAL AND INTERNATIONAL PRONOUNCEMENTS

The Botswana national development plans have acknowledged challenges posed by rapid urbanisation in the country. The challenges faced were indicated mainly as shortages of housing in urban areas. Then the revised National Population Policy of 2010 also noted that rapid urbanisation has resulted in the establishment of eight towns that were a result of rural to urban migration. According to the policy, reclassification of large villages to urban centres has also influenced population trend in urban areas. The aim of the policy is to improve quality of live for all regardless of the place of residence and specifically to manage rapid urbanisation, its challenges and opportunities, and to exploit its development potential in both urban and rural areas. One of the aspects of managing the growth of urbanisation is cited as creation employment opportunities in rural areas. On the other side, vision 2016 recognised that urbanisation is an integral part of development that cannot be halted; the challenge is to manage increase in urbanisation and provide housing and amenities, also the challenges of foreign influence on the cultural aspects in urban areas. Vision 2036 also focuses on improving the standard of leaving for all. These pronouncements that the government of Botswana have embarked on are within the frameworks of Agenda 2030 that focuses on inclusive development that leaves no one behind. The aim is to tackle poverty and hunger, provide citizen with good health facilities, quality education, ensures gender equity, clean water and sanitation, affordable clean energy and many others. On the other hand Agenda 2063 advocates for Africa that is people oriented. The policies mentioned above also relates to these.

7.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The paper attempted to look at urban trends and levels in Botswana from 1971 to 2022, and urban population growth. It also looks at demographic population composition for 2022 with specific reference to sex, age dependency ratios. The paper acknowledges that there are no uniform definitions of what is considered to be urban across counties and that even one country can have more than one definition. Then, the paper presents the findings of the results by indicating that the numbers of urban areas have increased from one census period. The paper indicates that the reclassification of rural areas into urban has played a major role in the level of urbanisation in the country through the years, which pose a problem when such areas are declassifies, being reclassifies to being rural again.

While during the early estimation periods there were only five areas considered to be urban, the number increased to eight by 19981. Then, the 2022 census estimated the number to be 66. This included the eight as recorded in 1981 and an extra 58 coming as a result of reclassification of large villages to urban villages. Associated with increases in the number urban areas there has been continuous increase in the size of population in urban. Up to 1991 census, there were more people in rural areas than in urban areas, with only 45 percent in urban areas. The turning point was from the 2001 when the census estimated that the population size in urban areas overtook the population size in rural areas and has continues to grow. Sex ratios in urban areas seem to favour females as the total sex ratio shows 91 males per 100 females. The only difference being at ages 45 - 49 and 50 - 54 were the sex ratio favours males. This is different from the situation in rural areas that shows sex ratio being dominated by males at all ages apart from at older ages where there are more females than males, something that may be attributed to differential mortality at those ages. The paper also looked at some of the policy pronouncement by government and other international organisation and realised that some programmes may have worked indirectly to influence the rate of population growth in large urban areas facilitating their transition to urban.

Recommendation:

- There does not seem to be a national definition of what constitute an urban area apart from the definition provided by the Census Office. Granted, the office is responsible for the provision of statistical data, but as is the case with cities and towns that are so declares through policy pronouncements, urban areas should also be classified through policy. This will ensure that there is no declassifications and reclassification. This will be important for when the reclassified villages stop being housing reserves to the nearest town, and the percentage of labour force engaged in non-agricultural activities falls below 75%.

- It is said that part of urban growth came as a result of rural to urban migration, given the high levels of mobility among Batswana and an increase in the urban places, it is necessary to assess the main contributing factor to urbanisation, with a view of addressing the issue.

- According to the definition, areas are considered to be urban based on the population size and the proportion of labour force involved in non-agricultural activities, it is important that an assessment is made to find out where the employment takes place given that almost all the reclassified large villages are within 50 kilometre radius of Gaborone, Francistown and Lobatse. This will be to assess properly whether or not the population increases in these areas are as a result of a spill-over from the said towns and cities.

- The policy programmes do not provide specific implementation procedures on what is to be done for example, provision of better housing.

- Given that most of the employed people are commuting, there is need for agricultural transformation so that people stay in rural areas.

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9.0 APPENDICES A: DERIVED TABLES

TABLE 1: Trends in Urban Areas in Botswana, 1971 – 2022

YEAR	1971	1981	1991	2001	2011	2022
Number of Urban areas	5	8	25	34	52	66
Urban Population	54,300	166,400	600,100	909,800	1,297,287	1,569,928
% urban	9.5	17.7	45.1	54.1	64.	66.6
% Rural	90.9	82.3	54.9	45.9	36.0	33.0
Total Pop	596,900	941,000	1,326,800	1,680,900	2,024,904	2,359,609
% Increase		57.6	41.0	26.7	20.5	16.5
% urban change		206	260.1	51.6	42.6	21.0

Percentage Change ((P2-P1)/P0)*100

TABLE 2: Urban Density, Rural-Urban-linkages Indicators and Rural-urban Growth Index

YEAR	1971	1981	1991	2001	2011	2022
Urban area	542,600	774,600	726,700	771,100	727,617	789,681
Rural Population	0.01	0.01	0.04	0.06	0.09	0.11
Urban Density	108,520	96,825	29,068	22,679.41	13,992.63	11,964.86
Linkage indicators		3.5	-6.4	5.9	-5.8	8.2
Rural growth Rate %		101.5	113.2	41.0	35.1	19.0
Urban growth Rate %		98.0	119.6	35.1	40.9	10.3
Growth index		98	120	35	41	10

TABLE 3: Age and Sex Composition of Urban and rural Population in 2022

	TOWNS			URBAN VILLAGES			RURAL AREAS		
AGE GROUP	M	F	SEX RATIO	M	F	SEX RATIO	M	F	SEX RATIO
<15	26.75	25.31	99	32.93	29.63	101	34.53	34.74	102.36
15-19	8.74	8.98	91	9.15	8.62	96	7.97	7.06	116.33
20-24	10.01	10.44	90	8.53	8.40	92	6.99	6.49	110.92
25-29	9.85	10.13	91	8.78	8.8	90	7.3	6.96	107.92
30-34	9.51	9.83	90	8.42	8.54	89	7.14	6.69	109.88
35-39	9.68	9.96	91	8.25	8.31	90	7.48	6.73	114.38
40-44	8.23	8.10	95	6.82	6.78	91	6.23	5.66	113.41
45-49	6.32	5.85	101	5.24	5.10	93	5.21	4.78	112.20
50-54	4.33	3.85	105	3.53	3.74	85	3.89	4.04	99.07
55-59	2.81	2.78	95	2.58	2.21	73	3.21	3.89	85
60-64		85.15	80	2	3	69	3	4	83
65 +	1.55	1.81	80	1.94	2.56	69	2.94	3.63	83.23
Overall Sex ratio	2.02	2.85	66	3.72	3.37	54	6.96	7.17	120.0

TABLE 4: Rural and Urban Areas Population in 2022 by Age and Sex

	URBAN		RURAL	
AGE GROUP	MALES	FEMALE	MALES	FEMALES
<15	31.13	28.40	34.53	34.74
15 -19	9.03	8.71	7.97	7.06
20 -24	8.96	8.98	6.99	6.49
25 - 29	9.09	9.23	7.3	6.96
30 -34	8.74	8.91	7.14	6.69
35 -39	8.67	8.78	7.48	6.73
40 - 44	7.23	7.16	6.23	5.66
45 - 49	5.55	5.31	5.21	4.78
50 - 54	3.76	3.77	3.89	4.04
55 - 59	2.65	3.09	3.21	3.89
60 - 64	1.83	2.35	2.94	3.63
65 +	1.83	5.21		9.19
Dependency	1.83	5.21		9.19

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