Factors Determining Men's Fertility Preferences in Botswana
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Introduction

Numerous studies and surveys, including Censuses, Botswana Family Health Surveys (BFHS) and Botswana Demographic Surveys (BDS) have consistently presented declining fertility levels in Botswana. According to the past Botswana Population and Housing Censuses (Central Statistics Office/Statistics Botswana, 2011), downward trends have been observed over the years on Total Fertility Rate (TFR), General Fertility Rate (GFR) and Crude Birth Rate (CBR). TFR has dropped from 6.5 to 2.7 children per woman between 1971 and 2011 (Central Statistics Office/Statistics Botswana, 2011). Crude Birth Rate (CBR) has also decreased from 45.3 births per 1000 in 1971 to 25.7 births per 1000 in 2011 (Central Statistics Office/Statistics Botswana, 2011). Knowledge of contraceptive methods and their usage are crucial factors for an individual's or couple's decision on fertility preference. Contraceptive knowledge and its usage are significantly high in Botswana. BFHS IV (Statistics Botswana, 2014) has estimated the females' and men's knowledge of at least one contraceptive method at 98.3% and 96.8%, respectively. According to the BFHS IV results, Contraceptive Prevalence Rate (CPR) for women stood at 52.3% and was 50% for males. Generally, the use of contraceptive methods, especially modern methods, has substantially increased over the years. In particular, the use of condom which serves as a dual-protection in a generalized HIV/AIDS epidemic country has been gaining momentum. The use of condom increased from 1 percent in 1984 to 41.7 percent in 2007 (Statistics Botswana, 2014).

Male involvement is a growing trend in reproductive health. An understanding of men's attitudes, preferences and behaviour concerning reproduction outcomes becomes an important area for demographic investigation. This study posits that men are reproductive actors with their own fertility preferences that deserve attention. Moreover, it is worth noting that men's fertility preference can result in undesirable household and national fertility outcomes if left unchecked. In recognition therefore that men's and women's reproductive goals differ, this paper attempts to examine factors that determine fertility preferences of men in Botswana. It provides insight into the number of children the respondents consider desirable, their fertility history and behaviour, value placed on children and effects of spousal communication on family size and contraceptive use. This study investigates potential avenues to involve male partners in family planning decisions.

Moreover the paper has picked interest that much of the existing literature has focused on women's fertility preferences. There is also a growing body of investigation and knowledge on men's fertility preference across the world and to some extent in the Sub-Saharan Africa region but this is very limited in Botswana. Existing literature in the country related to this subject is either outdated or limited in scope. This study therefore intends to fill this research gap of knowledge and also attempts to generally address the scarcity of studies on men in regard to the population matters, especially in Botswana.

Theoretical Framework

In countries where the population growth is experiencing a downward trend, factors contributing to fertility decline are under scrutiny. Both individual or couple's attitudes and aspirations in relation to fertility decision-making are being investigated because of their importance on the overall fertility in a society. Theoretical and empirical literature contains many assumptions

about the nature of fertility decision-making in the family building process. In some cases, the notion of individual decision-making is ignored and the focus is on societal decisions on the basis of norms and values formulated to achieve the behaviour. In others, the emphasis is on the individual as the decision-maker carefully weighing costs and benefits of making choices to satisfy personally defined objectives. From the recent past, it has become inevitable to recognize men's eventual influence of fertility levels because of their prominent roles in sexuality and reproductive issues.
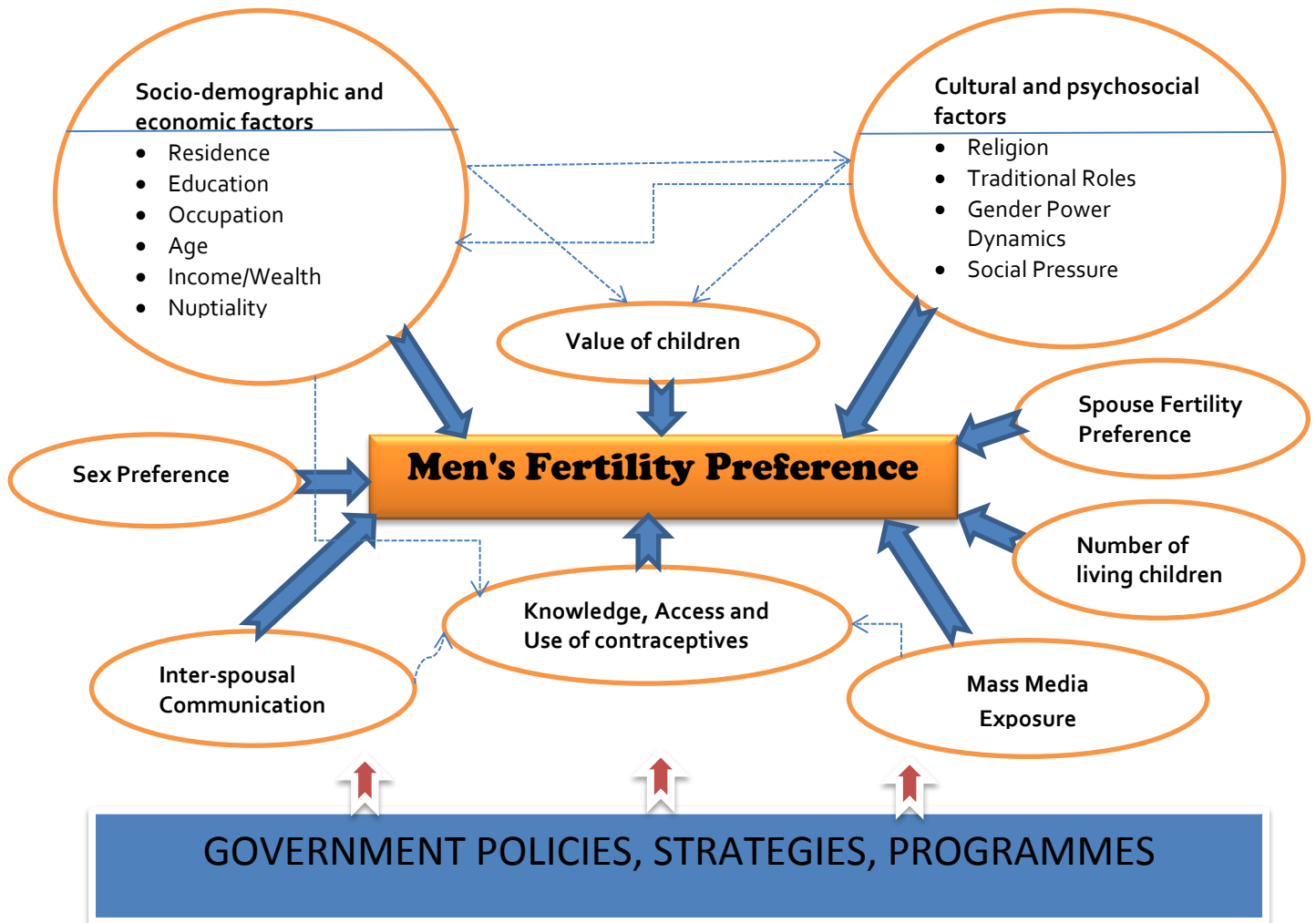
Key assumption underlying this theoretical framework is that a male character makes decisions about his fertility preferences under certain conditions and follow through these decisions until he attains his set fertility target. The framework attempts to address the behavioural, psychosocial steps and socio-economic interventions involved in attaining the men's fertility aspirations. The framework shows socio-demographic and economic factors, cultural and psychosocial factors, number of living children, sex preference, value of children, mass media exposure, inter-spousal communication and knowledge, access and use of contraceptives as key determinants of men's fertility preference. On socio-demographic and economic factors - place of residence, age, level of education, occupation, income and marital status would influence a

man's fertility preference. Similarly, religion, traditional roles, gender power dynamics, social pressure would constitute cultural and psychosocial factors for the determination of man's fertility preference. It has also been observed in literature that sex preference, especially biased to son's preference, would influence the number of children one would eventually have. The theoretical framework posits that men's fertility preference is influenced by their exposure to mass media communication like radio, newspapers and television from which they will gather knowledge to presumably enable them to make informed decisions in relation to their fertility. To dispel gender-power relations, inter-spousal communication serves as a basis for men's fertility preference. Based on the number of living children men's fertility preference would be differentiated. Lastly, men's contraceptive knowledge, access and usage would most likely diminish both their fertility desires and actual family sizes.

The role and influence of Government or public policies is also very paramount on the determination of fertility levels for individuals. The extent to which effective public policies are articulated and implemented generally impacts on individuals' determination of fertility. Jain (Anrudh, 1998) lamented that fertility control is about the role of the state in regulating individual behavior. He said "It starts with the specification of the rationale for government involvement in policies to alter human behavior related to reproduction and sexuality. It involves justifying the means selected by a government to influence individual fertility behavior". The 1997 National Population Policy explicitly provided a policy direction on the reduction of fertility in Botswana. In addition, the Ministry of Health strengthened its RH programme for easy accessibility of SRH facilities, services and commodities. Child survival and maternal health programmes are also key in the determination of fertility. Furthermore, from the non-health perspective, Government played a role in the scaling up provision of education and employment opportunities. All these are critical determinants that could be attributed to the reduction of fertility levels in Botswana. It is however worth-noting that due to the decision to use secondary, quantitative data not all aspects of the conceptual framework will be explored. For instance, the data does not provide variables to measure income, occupation and neither were respondents interrogated on matters related to the value of children, social pressure, traditional roles in the determination of children individuals wanted.

Methods

Data Source

Data used in this study is secondary data obtained from the Botswana Family Health Survey (BFHS) IV conducted by the Central Statistics Office between September 2007 and January 2008. It is one of the inter-censal surveys used to estimate mainly fertility and mortality trends. Unlike its predecessors, BFHS IV included males as subjects of the study and assessed their sexuality, contraception knowledge and use and fertility preferences.

Study Sample Size

Because of interest in men's fertility desires and associated contraceptive behavior, the study limits its analysis to a special sub-sample of men in the 15-49 years age category. The total eligible number of participants who responded to the questions on male fertility preference was 1513, thus the number selected for analysis.

Dependent Variable

Fertility Preference: The data was analysed based on responses to the question "if you could go back to the time you did not have any child and could choose exactly the number of children to have, how many would that be?". The question aims at estimating the total number of children

these respondents would choose to have. Numeric values obtained as responses ranged between 0 and 21. Non-numeric responses were "any number" and "don't know".

Binary logistic regression requires that the dependent variable be non-metric. To satisfy the non-metric level of measurement for the dependent variable, fertility preference was categorized into the following nominal scale:

Low fertility preference (0-2 children) = 1 High fertility preference (≥ 3 children) = 0

Independent Variables

Based on the dataset, the study considered several demographic, socio-economic and cultural factors as descriptive and explanatory variables on men's fertility preference. The key variables considered were: age, level of education, place of residence, wealth index and marital status. Other variables include: sex preference, inter-spousal communication and mass media exposure.

Statistical analysis

Generally, the data was analyzed employing different analytic procedures. These procedures involved an examination of the distribution of the respondents according to each of the selected characteristics and also the examination of the patterns of association between the dependent and independent variables. Simple statistical methods (frequencies, percentages) presented in tables, pie and graphical charts were used to describe the characteristics of the study population. To further assess the association and the effect of independent variables on men's fertility preference, cross tabulations with chi-square tests and a binary logistic regression were used. Means were also employed to substantiate the probable correlation of men's fertility preference to the independent variables. Statistical Package for Social Sciences (SPSS) software (IBM SPSS Statistics 21) was used to anaylse the dataset.

Results

Sample Characteristics

More men lived in urban areas (64.6%), constituting Cities/Town and Urban Villages, whilst slightly higher than a third of them (35.4%) lived in rural areas. A significantly high proportion of the sample was between ages 25 and 44. Those below the age of 25 constituted less than 5% of the sample size. Regarding the marital status of men, close to two-thirds (64.5%) were in a 'living together' relationship with only 35.5% in marital union. Majority of the respondents have acquired secondary or higher education (70.7%) compared to those who have only been to primary education (28.4%) and non-formal education (0.9%). With respect to the wealth index, quintiles 3-5 had a fair distribution of respondents approximately between 23-29%. The poorest quintiles (1 and 2) constituted about 25% of the sample size. The demographic and socio-economic characteristics of this sample largely resemble those of the population of the country especially with regards to place of residence, education and marital status.

Tables 1 illustrates the predicted outcomes of the dependent variable (fertility preference) as determined by explanatory variables (Residence, Education, Age, Marital Status, Wealth).

Table 1: Binary Logistic Regression coefficients for men's fertility preference regarding demographic and socio-economic factors

Explanatory Variable	Coefficients (B)	Odds ratio(β)	Sig.
Residence♠			
City/Town	.358	1.431	.007
Urban Village	.108	1.114	.006
Rural *(reference)*	---	---	---

Education♣			
Primary *(reference)*	---	---	---
Secondary	.384	1.468	.000
Higher	.578	1.782	.005
Non-formal	-.201	.818	.067
Age♥			
15-24	1.436	4.205	.000
25-34	.769	2.157	.001
35-44	.335	1.399	.096
45+ *(reference)*			
Marital Status♦			
Married *(reference)*			
Living Together	.927	.396	.000
Wealth Index△			
Poorest quintiles *(reference)*			
2nd quintiles	.398	.247	.001
3rd quintiles	.274	1.280	.003
4th quintiles	.042	2.353	.007
Wealthiest quintiles	.873	4.418	.000

Notes: *CI = 95%; Family size preference: a) smaller families (0-2 children) = 1; b) larger families (>3 children) = 0 ♠: $X^2=7.712$; df=2   ♣: $X^2=25.197$; df=3   ♥:

$X^2=35.975$; df=3   ♦: $X2= X^2=27.735$; df=2   △: $X^2=28.096$; df=4

Results obtained from table 1 above indicate that urban dwellers are most likely to prefer smaller family sizes. The table depicts that men who live in Cities/Towns are 1.4 times more likely to prefer smaller family sizes compared to their counterparts in Rural villages. On the level of education attained by respondents, results show that men who have higher school level education and secondary school education are 1.8 times and 1.5 times respectively, more likely to prefer smaller family sizes than those with primary level education. Table 1 also shows that younger men tend to prefer smaller family size. The youth, in the 15-24 and 25-34 year age groups, are 4.2 and 2.2 times respectively more likely to prefer the smaller family sizes than the older age group of 45+ years.

Relative to the wealth index, results suggest that the poorer respondents prefer larger families relative to the wealthier respondents. The wealthiest quintile was 4.4 times more likely to prefer a smaller family size whilst those in the third quantile also showing 1.6 times more likely to prefer a smaller family size as compared to the their poorest counterpart.
Marital status did not depict any statistical significant difference between those living together relative to the married once.

Conclusion
As demonstrated by the findings of the study, men's fertility preference is a function of their demographic and socio-economic characteristics. However it is clear that there are other critical factors required to further explain men's fertility preference. Because the BFHS data had no information on attitudinal aspects like value of children, attitude towards family planning, or people's religious belief the study cannot explain fully how these cultural factors are influencing men's fertility preference in Botswana.
Other underlying factors would involve government policies, institutional mechanisms, interventions and programmes. Some of the eminent institutional, financial and programmatic

challenges in the implementation of the RH that needs to be addressed for the benefit of men include the following:

- Development of institutional mechanisms e.g. establishment of functional Technical Advisory Committees and District Male Action Groups etc.
- Development of capacity for personnel to efficiently implement the MI programme. Health providers need further training to change their reception and attitudes to their clients and make services more male-friendlier for wider accessibility.
- Increased resources. A relatively new project such as Male Involvement required adequate financial and technical resources to execute their plans.
- Effective community mobilization and participation of religious and cultural leaders and institutions would be ideal for a well-functioning MI programme in the country. Recognition to supplementary and complementary role of and involvement of civil society, including NGOs and the private sector is required to improve the delivery in MI services.
- Failure to involve men in decisions pertaining to family size and family planning programmes can have serious implications on the execution of the MI programme and consequently on the maintenance of desired fertility levels in the country.

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