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Research Article

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Beyond Unplanned or Unwanted: Do We Consider Self-Reported Health Status, Sexual Activity and Fertility Preference of Women as predictors of Abortion in Ghana?

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ABSTRACT

Background: Although, in Ghana, an induced abortion occurs in every society, and a substantial proportion of pregnancies are resolved by abortion.

Objective: In line with this, the study set out to investigate how self-reported health status, sexual activity and fertility preference of women influence abortion in Ghana.

Methods: Data were extracted from the 2022 GDHS. Frequency, percentages, Pearson's chi-squared test of independence and binary logistic regression were used to make meaning to the data.

Results: Good health status was significant at p<0.001, (OR=1.241, 95%CI ([1.171-1.315]). Moderate health status was significant at p<0.001, (OR=1.819, 95%CI [1.701-1.945]). Bad health status was significant at p<0.001, (OR=1.622, 95%CI [1.448-1.816]). Very bad health status was significant at p<0.001, (OR=1.777, 95%CI [1.358-2.327]). Not active in last 4 weeks - postpartum abstinence was significant at p<0.001, (OR=0.705, 95%CI ([0.650-0.765]). Undecided was significant at p<0.001, (OR=0.720, 95CI ([0.638-0.813]). Wants after 2years and above was significant at p<0.001, (OR=0.608, ([0.564-0.654]).

Conclusion: Regardless of whether abortion is legal or restricted, it is recommended that provision of post-abortion care should be made a core obligation in Ghana under the right to sexual and reproductive health.

Keywords: Abortion, Fertility Preference, Inspire, Self-Reported Health Status, Sexual Activity

Introduction

Abortion becomes an option after one has discovered that the life of the baby has a health problem or congenital disorder [1,2]. Others also choose abortion when they realize continuing with the pregnancy may put their own health at risk [3,4]. Each year, worldwide, about 73 million induced abortions take place [5]. Surprisingly, among all the unplanned pregnancies, 3 out of 10 (29%) and 6 out of 10 (61%) ends in induced abortion [5]. As of 2018, 37% of the world's women had access to legal abortions without limits [6,7]. In places where abortion is legalized and accessible with less stigma, people access it safely with no risk [8]. However, in places where abortion is stigmatized, criminalized or restricted, people are forced to resort to unsafe abortions [8]. A woman who is engulfed with pregnancy complications, including placental abruption, bleeding from placenta previa, preeclampsia or eclampsia, and cardiac or renal conditions, abortion is the only measure to preserve her health or save her life [9].

Responsibility for existing children, ideal conditions for motherhood and abortion decisions are interrelated, with abortion sometimes being a means to achieve desired fertility outcomes or manage unintended pregnancies [10-14]. Women's sense of responsibility for their existing and future children influences their decision to seek an abortion [15-16]. In many cases, women

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choose abortion because they are motivated to be good parents [17,18]. Women who have no children want the conditions to be right when they do; women who already have children want to be responsible and take care of their existing children [19,20].

Studies have established that the immediate reason women often give for seeking induced abortion is that the pregnancy was unplanned or unwanted [18,21-27]. It is noted that induced abortion is 7% in Ghana [28], indicating that although induced abortion occurs in every society in Ghana, and a substantial proportion of pregnancies are resolved by abortion [29-32]. However, there is inadequate empirical research evidence on self-reported health status, sexual activity and fertility preference that underlie abortion among women in Ghana [29,33]. Based on this, the current study is essential. Specifically, the study seeks to: 1) analyse if self-reported health status of women influences abortion in Ghana; 2) ascertain whether sexual activity of women predicts abortion in Ghana; 3) examine whether fertility preference of women influences abortion in Ghana. The study further hypothesized that statistically significant relationship does not exist between self-reported health status, sexual activity as well as fertility preference of women and abortion in Ghana.

Methods

Variable Constructs

Self-reported health status, sexual activity, and fertility preference were the explanatory variables while abortion was the outcome variable. Self-reported health status was measured with "self-reported health status"; sexual activity was measured with "recent sexual activity"; fertility preference was measured with "fertility preference, desire for more children, ideal number of children [group], ideal number of boys, and ideal number of girls" while abortion has (ever had a terminated pregnancy, month pregnancy ended, completeness of last termination information, months when pregnancy ended, and other such pregnancies). Therefore, data revolving them were extracted from the 2022 Ghana Demographic and Health Survey for analysis.

Data Processing and Analysis

Data were processed with SPSS version 27. Frequency distribution, Pearson's chi-squared test of independence and binary logistic regression were used to summarize the data. The frequency distribution was used to compute the responses of the study participants into proportions. The Pearson's chi-squared test of independence was used to test the hypotheses stated in the study to ascertain whether a relationship exists between the explanatory variables and the outcome variable.

The binary logistic regression was used to test the influences of self-reported health status, sexual activity, and fertility preference on abortion among women in Ghana.

Results

Table 1 has outcome of abortion among women in Ghana. This variable was measured with "ever had a terminated pregnancy, month pregnancy ended, completeness of last termination information, months when pregnancy ended, and other such pregnancies." When asked if women had ever had a terminated pregnancy or not, the results revealed that 71.8% of the women never had a terminated pregnancy while 28.2% indicated they ever had a terminated pregnancy.

Table 1: Abortion among Women in Ghana

Variable	Frequency	Percentage
Ever had a terminated pregnancy		
No	24876	71.8
Yes	9787	28.2
Total	**34663**	**100.0**

Source: GDHS (2022).

Among the 9787 participants that indicated they ever had a terminated pregnancy, 24.5% said the pregnancy ended in the third month while 0.7% indicated on the tenth month (see Table 2). On completeness of last termination information, more than thirty per cent (37.1%) reported month, year and a day while 0.2% indicated none (see Table 2).

Table 2: Women Ever had Abortion in Ghana

Variable	Frequency	Percentage
Months pregnancy ended		
1	1452	14.8
2	2137	21.8
3	2399	24.5
4	1079	11.0
5	570	5.8
6	480	4.9
7	290	3.0
8	235	2.4
9	1081	11.0
10	64	.7
Completeness of last termination information		
Month, year and day	3633	37.1
Month and year	1946	19.9
From calendar	2791	28.5
Year	1395	14.3
None	22	0.2
Total	**9787**	**100.0**

Source: GDHS (2022).

Table 3 presents the outcome of self-reported health status among women in Ghana. On participants self-reported health status, about half (45.4%) of the participants reported that their health status is good while 0.7% said their health status is very bad.

Table 3: Self-Reported Health Status among Women in Ghana

Variable	Frequency	Percentage
Self-reported health status		
Very good	10092	29.1
Good	15729	45.4
Moderate	6983	20.1
Bad	1620	4.7
Very bad	239	0.7
Total	**34663**	**100.0**

Source: GDHS (2022).

Further analysis was conducted with Pearson's chi-squared test of independence on participants' self-reported health status and abortion in Ghana. This analysis was done to test the hypothesis there is no statistically significant relationship between self-reported health status of women and abortion. Statistically significant relationship was found between self-reported health status [p<0.001] and abortion among women in Ghana (see Table 4).

Table 4: Relationship between Self-Reported Health Status and Abortion among Women in Ghana

Variable	No (%)	Yes (%)	Total n (%)	χ^2	P-value
Self-reported health status				337.952	0.000
Very good	76.6	23.4	10092(100.0)		
Good	72.5	27.5	15729(100.0)		
Moderate	64.3	35.7	6983(100.0)		
Bad	66.9	33.1	1620(100.0)		
Very bad	64.9	35.1	239(100.0)		

Note: Row percentages in parenthesis, Chi-square significant at (0.001), (0.05), (0.10)
No: never abort Yes: abort.
Source: GDHS (2022).

Table 5 has outcome of binary logistic regression of self-reported health status and abortion among women in Ghana. This analysis was conducted to ascertain the influences self-reported health status has on women's abortion in Ghana.

Table 5: Outcome of Binary Logistic Regression of Self-Reported Health Status and Abortion among Women in Ghana

Variable	B	Wald	Sig.	Exp(B)	*95 CI*	
Self-reported health status (Very good=1.0)						
Good	.216	53.480	.000	1.241	1.171	1.315
Moderate	.598	303.912	.000	1.819	1.701	1.945
Bad	.484	69.969	.000	1.622	1.448	1.816
Very bad	.575	17.497	.000	1.777	1.358	2.327
Constant	**-1.188**	**2549.567**	**.000**	**.305**		

Source: GDHS (2022). Significant at 0.05.

Overall, the logistic regression model was significant at -2LogL = 40926.739; Nagelkerke R^2 of 0.014; χ^2= 333.079; p<0.001 with correct prediction rate of 71.8%. More importantly, the Model Summary which shows a Nagelkerke R^2 of 0.014 suggests that the model explains 1.4% of variance in the likelihood of abortion among women in Ghana. With this percentage contribution to the entire model, the results confirmed the whole model significantly predict women's abortion in Ghana.

It emerged in Table 5 that good health status was statistically significant related to abortion at p<0.001, (OR=1.241, 95%CI ([1.171-1.315]). This factor tags those women to have 1.2times more likely to abort a pregnancy compared with women who had very good health status. Further, it was found that moderate health status was statistically significant at p<0.001, (OR=1.819, 95%CI [1.701-1.945]). This variable categorises those women to have 1.8times more likely to abort a pregnancy compared with women with a very good health status (see Table 5). Furthermore, bad health status was statistically significant at p<0.001, (OR=1.622, 95%CI [1.448-1.816]). This factor tags those women to have 1.6times more likely to abort a pregnancy compared with women with a very good health status (see Table 5). Additionally, very bad health status was statistically significant at p<0.001, (OR=1.777, 95%CI [1.358-2.327]). This variable has described those women to have 1.8times more likely to abort a pregnancy compared with women with a very good health status (see Table 5).

Results on sexual activity of women in Ghana are presented in Table 6. When women were asked to indicate their recent sexual activity, the results revealed that more than half (56.6%) of the women reported they were active in the last 4 weeks while 11.1% said they were not active in the last 4 weeks - postpartum abstinence.

Table 6: Sexual Activity of Women in Ghana

Variable	Frequency	Percentage
Recent sexual activity		
Active in last 4 weeks	19614	56.6
Not active in last 4 weeks - postpartum abstinence	3853	11.1
Not active in last 4 weeks - not postpartum abstinence	11196	32.3
Total	**34663**	**100.0**

Source: GDHS (2022).

Table 7 has the outcome of Pearson's chi-squared test of independence of sexual activity of women and abortion in

Ghana. This analysis was conducted to test the hypothesis there is no statistically significant relationship between sexual activity of women and abortion in Ghana. Statistically significant relationship was found between sexual activity of women [p<0.001] and abortion in Ghana.

Table 7: Relationship between Sexual Activity of Women and Abortion in Ghana

Variable	No (%)	Yes (%)	Total n (%)	χ^2	P-value
Recent sexual activity				73.586	0.000
Active in last 4 weeks	71.0	29.0	19614(100.0)		
Not active in last 4 weeks - postpartum abstinence	77.6	22.4	3853(100.0)		
Not active in last 4 weeks - not postpartum abstinence	71.1	28.9	11196(100.0)		

Note: Row percentages in parenthesis, Chi-square significant at (0.001), (0.05), (0.10)
No: never abort; Yes: abort.
Source: GDHS (2022).

Table 8 presents outcome of binary logistic regression of sexual activity of women and abortion in Ghana. This analysis was conducted to identify the effect sexual activity has on women's abortion in Ghana.

Table 8: Outcome of Binary Logistic Regression of Sexual Activity of Women and Abortion in Ghana

Variable	B	Wald	Sig.	Exp(B)	*95 CI*	
Recent sexual activity (Active in last 4 weeks=1.0)		73.007	.000			
Not active in last 4 weeks - postpartum abstinence	-.349	70.103	.000	.705	.650	.765
Not active in last 4 weeks - not postpartum abstinence	-.006	.058	.809	.994	.944	1.046
Constant	**-.895**	**3233.460**	**.000**	**.409**		

Source: GDHS (2022). Significant at 0.05.

Overall, the logistic regression model was significant at -2LogL = 41183.127; Nagelkerke R^2 of 0.003; χ^2= 76.692; p<0.001 with correct prediction rate of 71.8%. More importantly, the Model Summary which shows a Nagelkerke R^2 of 0.003 suggests that the model explains 0.3% of variance in the likelihood of abortion among women in Ghana. With this percentage contribution to the entire model, the results confirmed the whole model significantly predict women's abortion in Ghana.

It was observed in Table 8 that not active in last 4 weeks (postpartum abstinence) was statistically significant related to abortion at p<0.001, (OR=0.705, 95%CI ([0.650-0.765]). This factor tags those women to have 0.7times less likely to abort a pregnancy compared with women who were active in the last 4 weeks. However, the other remaining variable was not significant. This could be as a result of chance.

To answer research question 3 which is "analysing if fertility preference of women predicts abortion in Ghana" fueled data extraction on "fertility preference, desire for more children, ideal number of children [grouped], ideal number of boys, and ideal number of girls." The results are presented in Table 9.

Table 9: Fertility Preference of Women in Ghana

Variable	Frequency	Percentage
Fertility preference		
Have another	16586	47.8
Undecided	1708	4.9
No more	14149	40.8
Sterilised (respondent or partner)	1223	3.5
Declared infecund	997	2.9
Desire for more children		
Wants within 2 years	6750	19.5
Wants after 2+ years	8106	23.4
Wants, unsure timing	1730	5.0
Undecided	1708	4.9
Wants no more	14149	40.8
Sterilized (respondent or partner)	1223	3.5
Declared infecund	997	2.9
Ideal number of children (grouped)		
0	292	.8
1	84	.2
2	985	2.8
3	2879	8.3

4	8237	23.8
5	5471	15.8
6+	16061	46.3
Non-numeric response	654	1.9
Ideal number of boys		
0	5132	14.8
1	2826	8.2
2	11186	32.3
3	8130	23.5
4	3427	9.9
5	2562	7.4
6	570	1.6
7	85	.2
8	32	.1
9	3	.0
10	39	.1
12	11	.0
15	1	.0
Other	659	1.9

Ideal number of girls		
0	4934	14.2
1	2709	7.8
2	11085	32.0
3	8429	24.3
4	3378	9.7
5	2590	7.5
6	576	1.7
7	146	.4
8	66	.2
9	9	.0
10	64	.2
12	18	.1
Other	659	1.9

Source: GDHS (2022).

When asked about fertility preference of women, about half (47.8%) reported they have another child while 2.9% said they have been declared infecund. On desire for more children, nearly forty-one per cent (40.8%) reported they do not desire for more children while 2.9% reported being declared infecund. Concerning ideal number of children (grouped), more than forty per cent (46.5%) of the women reported they have more than 6 children while 0.2% intimated they only have a child. On ideal number of boys, a third (32.3%) of the women reported 2 boys while 0.0% quoted 15 boys. Whereas a third (32.3%) said ideally, they desire 2 girls 0.0% quoted 9 girls.

Table 10 has outcome of Pearson's chi-squared test of independence of fertility preference of women and abortion in Ghana. This analysis was done to test the hypothesis there is no statistically significant relationship between fertility preference of women and abortion in Ghana. Statistically significant relationships were found among all the variables studied under fertility preference of women. Namely: Fertility preference [p<0.001], desire for more children [p<0.001], ideal number of children [grouped] [p<0.001], ideal number of boys [p<0.001] as well as ideal number of girls [p<0.001] and abortion in Ghana.

Table 10: Relationship between Fertility Preference of Women and Abortion in Ghana

Variable	No (%)	Yes (%)	Total n (%)	χ^2	P-value
Fertility preference				87.594	0.001
Have another	73.5	26.5	16586(100.0)		
Undecided	74.8	25.2	1708(100.0)		
No more	70.3	29.7	14149(100.0)		
Sterilized (respondent or partner)	64.4	35.6	1223(100.0)		
Declared infecund	67.7	32.3	997(100.0)		
Desire for more children				268.620	0.001
Wants within 2 years	68.7	31.3	6750(100.0)		
Wants after 2+ years	78.3	21.7	8106(100.0)		
Wants, unsure timing	69.5	30.5	1730(100.0)		
Undecided	74.8	25.2	1708(100.0)		
Wants no more	70.3	29.7	14149(100.0)		
Sterilized (respondent or partner)	64.4	35.6	1223(100.0)		
Declared infecund	67.7	32.3	997(100.0)		
Ideal number of children (grouped)				94.478	0.001
0	73.6	26.4	292(100.0)		
1	75.0	25.0	84(100.0)		
2	71.4	28.6	985(100.0)		

3	72.2	27.8	2879(100.0)		
4	67.9	32.1	8237(100.0)		
5	71.7	28.3	5471(100.0)		
6+	73.8	26.2	16061(100.0)		
Non-numeric response	69.3	30.7	654(100.0)		
Ideal number of boys				104.236	0.001
0	70.0	30.0	5132(100.0)		
1	70.7	29.3	2826(100.0)		
2	69.8	30.2	11186(100.0)		
3	74.7	25.3	8130(100.0)		
4	73.5	26.5	3427(100.0)		
5	75.0	25.0	2562(100.0)		
6	67.9	32.1	570(100.0)		
7	69.4	30.6	85(100.0)		
8	81.3	18.8	32(100.0)		
9	0.0	100.0	3(100.0)		
10	71.8	28.2	39(100.0)		
12	45.5	54.5	11(100.0)		
15	100.0	0.0	1(100.0)		
Other	69.5	30.5	659(100.0)		
Ideal number of girls				164.693	0.001
0	69.8	30.2	4934(100.0)		
1	71.5	28.5	2709(100.0)		
2	70.3	29.7	11085(100.0)		
3	73.7	26.3	8429(100.0)		
4	75.0	25.0	3378(100.0)		
5	75.3	24.7	2590(100.0)		
6	67.5	32.5	576(100.0)		
7	47.9	52.1	146(100.0)		
8	74.2	25.8	66(100.0)		
9	100.0	0.0	9(100.0)		
10	45.3	54.7	64(100.0)		
12	22.2	77.8	18(100.0)		
Other	69.5	30.5	659(100.0)		

Note: Row percentages in parenthesis, Chi-square significant at (0.001), (0.05), (0.10)
No: never abort; Yes: abort.
Source: GDHS (2022).

Further analysis was conducted with binary logistic regression on fertility preference of women and abortion in Ghana. It was necessary to determine the effect fertility preference has on women's abortion in Ghana. This analysis was conducted on five (5) items. Namely: fertility preference, desire for more children, ideal number of children [grouped], ideal number of boys, and ideal number of girls. The results are presented in Table 11.

Table 11: Binary Logistic Regression of Fertility Preference of Women and Abortion in Ghana

Variable	B	Wald	Sig.	Exp(B)	*95 CI*	
Fertility preference (Have another=1.0)						
Undecided	-.329	28.122	.000	.720	.638	.813
No more	-.090	7.807	.005	.914	.858	.973
Sterilized (respondent or partner)	.180	7.575	.006	1.198	1.053	1.362

Declared infecund	.054	.538	.463	1.055	.914	1.217
Desire for more children (Wants within 2 years =1.0)						
Wants after 2+ years	-.498	173.703	.000	.608	.564	.654
Wants, unsure timing	-.057	.926	.336	.945	.842	1.060
Ideal number of girls (0=1.0)						
1	-.085	2.562	.109	.919	.828	1.019
2	-.015	.152	.697	.985	.916	1.061
3	-.187	21.952	.000	.830	.767	.897
4	-.260	26.248	.000	.771	.698	.852
5	-.291	27.641	.000	.747	.671	.833
6	.070	.549	.459	1.073	.891	1.291
7	.876	26.825	.000	2.402	1.724	3.347
8	-.290	1.044	.307	.748	.429	1.305
9	-20.369	.000	.999	.000	.000	.000
10	1.000	15.465	.000	2.718	1.651	4.473
12	1.957	11.864	.001	7.077	2.324	21.550
Other	-.020	.049	.824	.980	.821	1.170
Constant	**-.684**	**307.075**	**.000**	**.505**		

Source: GDHS (2022). Significant at 0.05.

After processing the data, only three (3) variables namely; fertility preference, desire more children and ideal number of girls were significant. Those that were not significant were removed from the model (see Table 11). Overall, the logistic regression model was significant at -2LogL = 40831.225; Nagelkerke R^2 of 0.018; χ^2= 428.593; p<.001 with correct prediction rate of 71.9%. More importantly, the Model Summary which shows a Nagelkerke R^2 of 0.018 suggests that the model explains 1.8% of variance in the likelihood of abortion among women in Ghana. With this percentage contribution to the entire model, the results confirmed the whole model significantly predict women's abortion in Ghana.

It emerged in Table 11 that women who were undecided on their fertility preference was significant at p<0.001, (OR=0.720, 95%CI ([0.638-0.813]). This factor tags those women to have 0.7times less likely to abort a pregnancy compared with women that reported they have another child. Further, do not desire for more children was significant at P=0.005, (OR=0.914, 95%CI [0.858-0.973]). This variable labelled those women to have 0.9times less likely to abort a pregnancy compared with women that reported they have another child (see Table 11). Furthermore, women currently undergoing sterilization (respondent or partner) was significant at P=0.006, (OR=1.198, 95%CI [1.053-1.362]). This factor labels those women to have 1.2times more likely to abort a pregnancy compared with women that reported they have another child (see Table 11).

On desire for more children, women who reported they want after 2years and above was significant at p<0.001, (OR=0.608, 95%CI [0.564-0.654]). This variable indicates that those women have 0.6times less likely to abort a pregnancy compared with women that reported they want within 2 years (see Table 11).
Regarding an ideal number of girls, women desire for, those that quoted 3 was significant at p<0.001, (OR=0.830, 95%CI [0.767-0.897]). This variable revealed those women to have 0.8times less likely to abort a pregnancy compared with women that reported zero (see Table 11). Further, those that quoted 4 was significant at p<0.001, (OR=0.771, 95%CI [0.698-0.852]). This variable label those women to have 0.8times less likely to abort a pregnancy compared with women that quoted zero (see Table 11). Furthermore, women that quoted 5 was significant at p<0.001, (OR=0.747, 95%CI [0.671-0.833]). This variable indicates that those women have 0.7times less likely to abort a pregnancy compared with women that quoted zero (see Table 11).

Additionally, women that quoted 7 was significant at p<0.001, (OR=2.402, 95%CI [1.724-3.347]). This variable revealed those women to have 2.4times more likely to abort a pregnancy compared with women that reported zero (see Table 11). Also, those that quoted 10 was significant at p<0.001, (OR=2.718, 95%CI [1.651-4.473]). This variable label those women to have 2.7times more likely to abort a pregnancy compared with women that quoted zero (see Table 11). Again, women that quoted 12 was significant at p=0.001, (OR=7.077, 95%CI [2.324-21.550]). This factor tags those women to have 7.1times more likely to abort a pregnancy compared with women that quoted zero (see Table 11). Moreover, statistically significant relationship was not found in the remaining variables which could be as a result of chance.

Discussion

Health status is a measure of how people perceive their health rating it as excellent, very good, good, fair, or poor. The assessment of self-reported health status among women in Ghana revealed varied health status. Per the study findings, 45.4% of women reported feeling as though they were in good health. Followed by 29.1% who also reported feeling as though they

were in a very good health. A little above twenty per cent (20.1%) reported feeling a moderate health. Nearly five per cent (4.7%) reported as though feeling a bad health. The percentage dropped to 0.7% for those who reported feeling as though very bad health. This suggests that how individuals perceive their health is influenced by complex factors which include environmental, socio-economic, and cultural conditions. For example, there is a correlation between age and reduced perception of health which occurs among individuals. Self-perceived health can be considered to be a valid and robust predictor of morbidity and mortality of several diseases which include cancer, stress, cardiovascular disease, among other chronic long-term health conditions. Low self-perceived health is associated with frequent use of healthcare services. Self-reported health status indicates perceived wellbeing and can highlight disparities within the population.

Further, as life expectancy increases and the population ages, self-reported health status may worsen if the health system is not also working to improve quality of life. Self-reported health is of particular relevance because as a global indicator, it reliably predicts functional ability, survival, and objective measures of health status. It is also related to life satisfaction and overall cognitive functioning, and as such reflects the complex relations between physical and psychological aspects of health and illness. Despite the deceptive subjectivity of self-perceived health, it can offer the benefit of enhancing the focus on patient-centered care, which healthcare systems worldwide are moving towards. The findings corroborated with a study which also found varied levels of health status amongst women, measured by individual socio-demographic factors, economic characteristics and endowment/social class and self-reported health status [34,35]. The similarity in the findings could partly be due to participants enrolled and phenomena studied.

It emerged that statistically significant relationship exists between self-reported health status of women and abortion in Ghana. With a p-value of <0.001 indicating a strong association. Due to this, the null hypothesis was denied. This finding refuted a study which found that no significant differences were observed in self-rated health or chronic pain after first-trimester versus second-trimester abortion [9].

It appeared how health status was perceived, either very good, good, moderate, bad or very bad increases the likelihood of abortion. The findings suggest that whichever category of health status a woman perceive her health translates to a higher odd of abortion. This finding affirmed previous research findings that there is a greater intention to abort when women feel more control, and have a higher perceived severity, regardless of the severity of the disease [36,37].

The analysis of sexual activity among women in Ghana brought to the fore that women have varied desire for sex. For instance, the study found that more than half (56.6%) of the women were active sexually in the last 4 weeks preceding the study. This finding suggests that, within an ongoing relationship, sex can indeed be used to intensify intimacy, deepen emotional connection, and potentially escalate the level of commitment, as it can foster vulnerability, shared experiences, and a sense of closeness. This finding corroborated with a study conducted in Uganda, and Malaysia which also found that more than half (55.6%) and (54.3%) respectively of the respondents reported having been sexually active in the last 4 weeks before the interview [38,39]. The similarity in the findings could be due to the replicable statistical analytical tool used for the analysis and the scenario or phenomena studied.

A third (32.3%) of the women disclosed that they were not active in the last 4 weeks (not postpartum abstinence). The reason for this finding could be that they used some medicines for certain conditions which one way or the other affected their mood thereby causing low sex drive. Further, menopause or other changes in hormones can directly affect a woman's interest in sex hence, low sex drive. This finding corroborated with a study which found that overall, 15.0% (13.9-16.2) of men and 34.2% (32.8-35.5) of women reported lacking interest in sex. The authors stressed further that this was associated with age and physical and mental health for both men and women, including self-reported general health and current depression. Lacking interest in sex was more prevalent among men and women reporting sexually transmitted infection diagnoses (ever), non-volitional sex (ever) and holding sexual attitudes related to normative expectations about sex [40]. However, a little above eleven per cent (11.1%) of the women intimated they were not active in the last 4 weeks (postpartum abstinence) which suggests they were waiting for the uterus to return to its initial size.

The study found that a statistically significant relationship exists between sexual activity and abortion among women in Ghana. Therefore, the null hypothesis was rejected. The p-value of <0.001 suggests that sexual activity of women is a strong predictor of abortion in Ghana. This finding is in line with a study that early sexual activity is a predictor of unwanted pregnancy, which is associated with choosing abortion [41]. On the contrary, this finding refuted previous research which found that there is no direct link between sexual activity during pregnancy and an increased risk of miscarriage or abortion. The authors stressed that most medical professionals agree that, in the absence of complications or specific risk factors, sex is generally safe throughout pregnancy [42,43].

The study found that women undergoing postpartum abstinence preceding the survey had higher odds of abortion. The plausible explanation could be that those women initiated sexual practices early after childbirth and were highly affected by puerperal infection, complications of unwanted pregnancy, which made them sought induced abortion. Further, it could probably be that the intensity and duration of breastfeeding during the postpartum was not intensive which made them to ovulate before the end of the second postpartum month and hence became pregnant after an intercourse and resorted to abortion. This finding agrees with a study that increasing modernization, urbanization and social change have gradually reduced the effectiveness of traditional birth spacing mechanisms and therefore women have increasingly been at risk of unintended pregnancies in the postpartum period [44].

The study found varied fertility preference level among women in Ghana. It was noted that about half (47.8%) of the women had another child. This finding is almost similar with a study which found that about one-third of the participants had a second

birth within 36 months of their first birth, and one-third had a second birth more than 36 months after their first birth [45]. However, nearly forty-one per cent (40.8%) did not want to have more, 4.9% were undecisive, 3.5% were sterilized (respondent or partner) and 2.9% declared infecund. These findings purport that, in many societies, individuals and couples have ideas about how many children they want to have in their lives. Desired number of children do not predict fertility. Hence, it contains a strong element of idealization and is predicted by social norms and mothers' rationalizations of their existing children, who may or may not have been desired at the time of conception.

The study found that a statistically significant relationship exists between fertility preference and abortion among women in Ghana. Therefore, the null hypothesis was rejected. The p-value of <0.001 found in all the variables studied under fertility preference suggest that fertility preference is a strong predictor of abortion among women in Ghana. This finding corroborated with a study which found that preference for sex-selective abortion was noted in 8.6% of the respondents. The association between parity ≥ 4 and preference for sex-selective abortion was statistically significant. Women who were child gender-biased were significantly more likely to prefer sex-selective abortion [46].

The study found that women who were not decisive as well as those who were not thirsty for more children had lower odds of abortion. These findings suggest that even though a woman might not be decisive of her fertility preference and as well might not be thirsty for more children. But, per default, if such woman happens to conceive, she might not think of abortion for any reason. For she knows that children are gift from God and that, that child could serve as economic security for her during her old age.

The study found sterilized women (respondent or partner) to have higher odds of abortion. Sterilization is a permanent form of contraception that involves blocking the tubes with small clips. Therefore, if a woman after going through the sterilization procedure and yet becomes pregnant, she might think there was a failure of the procedure. Hence, abortion might become the option since she does not want to have more children. Women that desire for more children after 2years and above had lower odds of abortion. These women desire for more children with a specified time. Therefore, if per their calculation, there was a mess up and they conceive, they might not opt for abortion even though the timing might be wrong. Likewise, women that quoted three, four, and five as the ideal number of girls they desire, had lower likelihood of abortion. The plausible explanation could partly be due to the fact that they might not know the sex of the fetus and that might not risk to resort to abortion when they become pregnant.

Furthermore, women that quoted seven, ten, and twelve as the ideal number of girls' desire had higher odds of abortion. These women might perceive that having female children of about seven to twelve is enough and might not want more. Financial concerns, mental health, and stability of a woman's home life can all play a role in the decision to end a pregnancy. Sometimes, people simply do not want to become a parent because they are not financially able to support a child. Moreover, these women might have been facing relationship issues that has affected their decision to have children. This finding agrees with a study which found that the likelihood of abortion has increased among women who had one or more children [47,48].

Conclusion

Obviously, researching self-reported health status, sexual activity, and fertility preferences of women who have had abortions in Ghana is critical for understanding the factors influencing abortion decisions and promoting safer reproductive health practices, ultimately informing policy and improving maternal health outcomes. Although there is variation in the specific circumstances under which an individual may access abortion. Where it is lawful, abortion should be accessible in practice that is when carrying a pregnancy to term would cause the woman substantial pain or suffering. Regardless of whether abortion is legal or restricted, it is recommended that provision of post-abortion care should be made a core obligation in Ghana under the right to sexual and reproductive health. Such care must be available on a confidential basis, without discrimination, and without the threat of criminal prosecution or other punitive measures. The country must also ensure access to a wide range of modern, safe and affordable contraceptive methods.

Declaration

Ethical Approval

We did not seek ethical approval. Hence, 2022 GDHS data were used.

Authors Contribution

Anthony Edward Boakye conceptualize the study, data curation, formal analysis, writing - review & editing, and methodology. Rita Tekpertey writing - original draft, formal analysis, Software and proof reading.

Competing Interests

No conflict of interest was declared.

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Availability of Data and Materials

The study made used of 2022 DHS data. Therefore, it is publicly available online.

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