

History of Sexually Transmitted Infections and Sex Partners Outside of Marriage Promote Condom Use Among Men in Ghana: Evidence From 2022 Ghana Demographic and Health Survey

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Abstract

Background

Sexually transmitted infections (STIs) are common with varied symptoms and have a profound impact on health. Condoms are widely recommended for the prevention of STIs.

Objective

Based on this, the study attempts to investigate how history of sexually transmitted infections and sex partners outside of marriage promote condom use among men in Ghana.

Methods

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

Results

It was revealed that heard about other STIs was statistically significant to condom use at p=0.021 (OR=1.634, 95%CI ([1.077-2.480]). Men who had one sex partner, excluding spouse, in the last 12 months was statistically significant at p=0.005, (OR=1.996, 95%CI ([1.225-3.251]). Men who had two sex partners, excluding spouse, in the last 12 months was statistically significant at P<0.001, (OR=5.680, 95%CI [2.584-12.485]). Men who had total number of five (5) sex partners in their lifetime was statistically significant at P=0.033, (OR=2.400, 95%CI [1.072-5.370]).

Conclusion

Based on the findings, the study recommends that stakeholders, NGOs and other bodies that matter in the achievement of SDG 3 which is Good Health and Well-Being should endeavour to help educate the general public on the health needs of having a single sex partner in life and the adoption of condom use.

Keywords: Condom use, Marriage, Sex Partners, Sexually Transmitted Infections

1. Introduction

Sexually transmitted infections are common (STIs) with varied symptoms [1]. STI infections develop when various bacteria, viruses or parasites infect one's body [1]. They are contagious, and most are transmitted from person to person by sexual contact through bodily fluids or from skin-to-skin contact by touching the infected part of a person's body, usually the genitals [1-4]. Sexually active individuals are at a higher risk of developing STIs. It is noted that, over 1 in 5 adults worldwide has a genital herpes infection [5-7]. STIs have a profound impact on health [8-10]. Therefore, condoms are widely recommended for the prevention of STIs [11,12]. They have been shown to be effective in reducing infection rates in both men and women [12]. The condom is effective at reducing the transmission of organisms that cause AIDS, genital herpes, cervical cancer, genital warts, syphilis, chlamydia, gonorrhea, and other diseases. Condoms are used during sexual intercourse to reduce the probability of sexually transmitted infections (STIs) [1,13]. Condoms, when used correctly and consistently, are safe and highly effective in preventing transmission of most sexually transmitted infections, including HIV. Condoms are safe, inexpensive and widely available [14-17]. For sexually active people, condoms are the only way to protect against STIs [18]. People of any age, including teens, can access condoms when the need arises without any hitch [19, 20].

In 2020, it was established that, worldwide, 374 million new STI cases occurred among adults aged 15–49 [21-24]. Most of these could have been prevented with the correct use of condoms [25]. Condoms are currently the only available multi-purpose prevention technology against HIV and STIs. Condom use has been a significant tool to decrease transmission of STIs including HIV globally [12, 25-28]. A modelling study that examined the impact of past and future condom use on the AIDS epidemic in 77 high-burden countries noted that increased condom use, since 1990 has averted an estimated 117 million new HIV infections, close to half (47%) of them in sub-Saharan Africa and more than one third (37%) in Asia and the Pacific [14,29]. The prevalence of condom use varies greatly between countries [30-32].

Having extra sex partners outside of marriage can influence the probability of condom use due to the higher odds of contracting STIs. Individuals with extra sex partners outside of marriage are often more aware of the risks of STIs, including HIV, and therefore might be more motivated to use condoms [33-37]. On average, in developed countries, condoms are the most popular method of birth control: 28% of married contraceptive users rely on condoms. In the average, less-developed country, condoms are less common: only 6–8% of married contraceptive users choose condoms [38-41]. In Ghana, condom use is less common among currently married men than among all men [5% versus 9%] [42].

Our search revealed that only three studies have examined the association between STI history and condom use alone [43-45]. However, when condom use alone was observed, only one study found that STI history in the past year was associated with a reduction in condom use at last sex in the last 12 months preceding the study [44]. It appeared also that the studies did not investigate the three variables combined. Therefore, the current study is essential. Specifically, the study seeks to: (1) examine whether the history of STI infections promote condom use among men in Ghana; (2) analyse if sex partners outside of marriage influences condom use among men in Ghana. The study further hypothesised that there is no statistically significant relationship between the history of STIs, sex partners outside of marriage and condom use among men in Ghana.

2. Methods

2.1. Variables and Data Extraction 2.1.1. Dependent Variable

In this study, the dependent variable was condom use. This variable was measured with the following indicators "used a condom during last sex with most recent partner, and brand of condom used for last sex." Therefore, data on these indicators were extracted from the 2022 GDHS for analysis.

2.1.2. Independent Variables

The independent variables were "history of sexually transmitted infections (STIs)" and "sex partners outside of marriage." So, on history of STIs, data involving the following indicators (had any STIs in last 12 months, had genital sore/ulcer in last 12 months, had genital discharge in last 12 months and heard about other STIs) were extracted for analysis while on sex partners outside of marriage, data involving "number of sex partners, excluding spouse, in last 12 months, total lifetime number of sex partners, wife can refuse sex, wife can ask husband to use a condom, and wife justified asking husband to use condom if he has STI."

2.1.3. Statistical Analytical Tool

Data were processed with SPSS version 27 and analysed with frequency distribution, Pearson's chi-squared test of independence and binary logistic regression. The frequency distribution was used to summarise participants responses into proportion. The Pearson's chi-squared test of independence was used to test the hypotheses stated in the study to either confirm or reject the null hypotheses while the binary logistic regression was used to identify the influences of the explanatory variables on the outcome variable.

3. Results

Table 1 presents condom use among men in Ghana. On whether men used a condom during the last sex with most recent partner revealed that 95.6% reported that they did not use a condom while only 4.4% said they used a condom.

Variable	Frequency	Percentage						
Used a Condom during last sex with most recent partner								
No	2767	95.6						
Yes	127	4.4						
Total	2894	100.0						
Source: GDHS (2022).	Source: GDHS (2022).							

Table 1: Condom use Among Men in Ghana

The 127 participants who indicated they used a condom were further asked to indicate the brand of condom used for last sex. The results revealed that 12.6% used fiesta, 70.1% used kiss, 3.1% used durex, 3.1% used gold circle, 3.1% used be safe/no logo and 0.8% used FC2, other (3.1%), and don't know (3.9%). Data on the

history of STIs involving "had any STIs in last 12 months, had genital sore/ulcer in last 12 months, had genital discharge in last 12 months and heard about other STIs" indicators were extracted for analysis. The outcome of sexually transmitted infections among men in Ghana are presented in Table 2.

Variable	Frequency	Percentage
Had any STI in last 12 months		
No	2682	92.7
Yes	212	7.3
Had genital sore/ulcer in last 12 months		
No	2704	93.4
Yes	190	6.6
Had genital discharge in last 12 months		
No	2685	92.8
Yes	209	7.2
Heard about other STIs		·
No	490	16.9
Yes	2404	83.1
Total	2894	100.0
Source: GDHS (2022).		

Table 2: History of Sexually Transmitted Infections among Men in Ghana

When asked participants whether they had any STIs in the last 12 months or not, the results revealed that 92.7% of them reported that they had not had any STIs in the last 12 months while 7.3% of them said they had had STIs in the last 12 months (see Table 2). Whereas 93.4% of the participants said they had not had genital sore/ulcer in the last 12 months 6.6% reported that they have had genital sore/ulcer in the last 12 months (see Table 2). On whether participants had a genital discharge in the last 12 months or not, revealed that 92.8% of the participants reported they did not have any genital discharge in the last 12 months while 7.2% intimated they have had genital discharge in the last 12 months (see Table 2).

When asked whether participants have heard about other STIs revealed that more than eighty per cent (83.1%) of the participants answered in affirmative (see Table 2). Table 3 has outcome of Pearson's chi-squared test of independence on the relationship between history of STIs and condom use among men in Ghana. This analysis was necessary because it helped test the hypothesis there is no statistically significant relationship between STIs and condom use among men in Ghana. Statistically significant relationship was found between heard about STIs [p = 0.006] and condom use. However, statistically significant relationship was not found between had any STIs in last 12 months [p = 0.410], had genital sore/ulcer in last 12 months [p = 0.371] and condom use.

Variable	No (%)	Yes (%)	Total n (%)	χ^2	P-value
Had any STI in last 12 months				1.783	0.410
No	98.0	2.0	2720(100.0%)		
Yes	96.5	3.5	173(100.0%)		
Don't know	100.0	0.0	1(100.0%)		
Had genital sore/ulcer in last 12 months				0.751	0.687

No	97.9	2.1	2608 (100.0%)		
Yes	98.6	1.4	282(100.0%)		
Don't know	100.0	0.0	4(100.0%)		
Had genital discharge in last 12 months				0.802	0.371
No	97.8	2.2	2276(100.0%)		
Yes	98.4	1.6	618(100.0%)		
Heard about other STIs				7.502	0.006
No	99.0	1.0	959(100.0%)		
Vac	97.4	2.6	1935(100.0%)		

Table 3: Relationship Between History of Sexually Transmitted Infections and Condom Use

In Table 4 has outcome of binary logistic regression of sexually transmitted infections and condom use among men in Ghana. This analysis was conducted on four (4) factors studied under STIs which includes (had any STIs in last 12 months, had genital sore/

ulcer in last 12 months, had genital discharge in last 12 months, and heard about other STIs) just to determine those that influence condom use among men in Ghana.

Variable	В	Wald	Sig	Exp(B)	95 CI			
Heard about other STIs (No=1.0)								
Yes	0.491	5.330	0.021	1.634	1.077	2.480		
Constant	-3.433	342.487	0.000	0.032				
Source: GDHS	Source: GDHS (2022). Significant at 0.05.							

Table 4: Outcome of Binary Logistic Regression on History of Sexually Transmitted Infections and Condom Use among Men in Ghana

After processing the data "heard about other STIs" was significant and that those that were not significant were removed from the model (see Table 4). Overall, the logistic regression model was significant at -2LogL = 1036.659; Nagelkerke R² of 0.007; χ^2 = 5.741; p = 0.017 with correct prediction rate of 95.6%. More importantly, the Model Summary which shows a Nagelkerke R2 of 0.007 suggests that the model explains 0.7% of variance in the likelihood of condom use among men in Ghana. With this percentage contribution to the entire model, the results confirmed the whole model significantly predict men's condom use in Ghana. It emerged in Table 4 that heard about other STIs was statistically significant to condom use at p = 0.021 (OR = 1.634, 95%CI ([1.077 - 2.480]). This factor tags those men to have 1.6times more likely to use a condom for sexual activity compared with men that reported they have not heard about other STIs. To analyse research objective two which is "if sex partners outside of marriage influence condom use among men in Ghana. Data revolving "number of sex partners, excluding spouse, in last 12 months, total lifetime number of sex partners, wife can refuse sex, wife can ask husband to use a condom, and wife justified asking husband to use condom if he has STI" were processed with SPSS and analysed with frequency distribution. The results are presented in Table 5.

Variable	Frequency	Percentage					
Number of sex partners, excluding spouse, in last 12 months							
0	2553	88.2					
1	289	10.0					
2	47	1.6					
3	5	0.2					
Wife justified asking husba	nd to use condom if he has S	ГІ					
No	625	21.6					
Yes	2253	77.9					
Don't know	16	0.6					
Total lifetime number of sex	x partners						

1	1253	43.3			
2	796	27.5			
3	482	16.7			
4	204	7.0			
5	81	2.8			
6	28	1.0			
7	14	0.5			
8	10	0.3			
9	3	0.1			
10	5	0.2			
11	3	0.1			
12	2	0.1			
13	2	0.1			
14	2	0.1			
15	2	0.1			
21	1	0.0			
Don't know	6	0.2			
Wife can refuse sex					
No	860	29.7			
Yes	1997	69.0			
Don't know/not sure/ depends	37	1.3			
Wife can ask partner to use	a condom				
No	1002	34.6			
Yes	1855	64.1			
Don't know/not sure/ depends	37	1.3			
Total	2894	100.0			
Source: GDHS (2022).					

Table 5: Sexual Partners Outside of Marriage Among Men in Ghana

When asked the number of sex partners participants had excluding spouse, in the last 12 months revealed that 88.2% of them said none while 0.2% said they had two (see Table 5). On whether wife justified asking husband to use condom if he has STI revealed that 77.9% of the participants answered in affirmative while 0.6% of the participants reported that they do not know (see Table 5). Concerning the total lifetime number of sexual partners participants had had revealed that 43.3% of the participants reported one while 0.0% of them indicated twenty-one (see Table 5).

On whether a wife can refuse sex or not, revealed that 69.0% of the participants reported that a wife can refuse sex while 1.3% of the participants said they do not know/not sure/depends (see Table 5). Regarding whether a wife can ask a partner to use a condom or not, revealed that 64.1% of the participants answered in affirmative while 1.3% of the participants said they do not know/not sure/

depends (see Table 5).

Table 6 presents the outcome of Pearson's chi-squared test of independence on sex partners outside of marriage and condom use among men in Ghana. This analysis was conducted to test the hypothesis there is no statistically significant relationship between sex partners outside of marriage and condom use among men in Ghana. Statistically significant relationship was found between number of sex partners, excluding spouse, in last 12 months [p < 0.001] as well as wife can ask husband to use a condom [p < 0.001] and condom use. However, statistically significant relationship was not found between total lifetime number of sex partners [p = 0.287], wife can refuse sex [p = 0.106] as well as wife justified asking husband to use condom if he has STI [p = 0.135] and condom use.

Variable	No (%)	Yes (%)	Total n (%)	χ^2	P-value
Number of sex partners, excluding spouse, in last				14.592	0.001
12 months					
0	98.0	2.0	2857(100.0%)		
1	97.1	2.9	34(100.0%)		
2	66.7	33.3	3(100.0%)		
Wife justified asking husband to use condom if he has STI				4.001	0.135
No	98.9	1.1	625(100.0%)		
Yes	97.6	2.4	2253(100.0%)		
Don't know	100.0	0.0	16(100.0%)		
Total lifetime number of sex partners				18.656	0.287
1	98.9	1.1	1253(100.0%)		
2	97.1	2.9	796(100.0%)		
3	96.5	3.5	482(100.0%)		
4	99.0	1.0	204(100.0%)		
5	96.3	3.7	81(100.0%)		
6	100.0	0.0	28(100.0%)		
7	92.9	7.1	14(100.0%)		
8	100.0	0.0	10(100.0%)		
9	100.0	0.0	3(100.0%)		
10	100.0	0.0	5(100.0%)		
11	100.0	0.0	3(100.0%)		
12	100.0	0.0	2(100.0%)		
13	100.0	0.0	2(100.0%)		
14	100.0	0.0	2(100.0%)		
15	100.0	0.0	2(100.0%)		
21	100.0	0.0	1(100.0%)		
Don't know	100.0	0.0	6(100.0%)		
Wife can refuse sex				4.491	0.106
No	98.6	1.4	860(100.0%)		
Yes	97.7	2.3	1997(100.0%)		
Don't know/not sure/depends	94.6	5.4	37(100.0%)		
Wife can ask partner to use a condom				23.771	0.000
No	99.7	0.3	1002(100.0%)		
Yes	97.0	3.0	1855(100.0%)		
Don't know/not sure/depends	97.3	2.7	37(100.0%)		

Table 6: Relationship Between Sex Partners Outside of Marriage and Condom Use Among Men in Ghana

The outcome of binary logistic regression of sex partners outside of marriage and condom use among men in Ghana is presented in Table 7. This analysis was conducted on five (5) items which includes (number of sexual partners, excluding spouse, in last 12 months, total lifetime number of sex partners, wife can refuse sex, wife can ask husband to use a condom, and wife justified asking husband to use condom if he has STI) studied under sex partners outside marriage to ascertain those that predict condom use among men in Ghana.

Variable	B	Wald	Sig	Exp(B)	95 CI				
Number of sex partners, excluding spouse, in last 12 months (0=1.0)									
1	0.691	7.711	0.005	1.996	1.225	3.251			
2	1.737	18.683	0.000	5.680	2.584	12.485			
3	3.254	11.896	0.001	25.886	4.075	164.449			
Total lifetime number of sex partners (1=1.0)									
2	0.106	0.202	0.653	1.112	0.701	1.763			
3	0.289	1.308	0.253	1.336	0.813	2.193			
4	-0.103	0.070	0.792	0.903	0.422	1.932			
5	0.875	4.536	0.033	2.400	1.072	5.370			
6	-18.357	0.000	0.998	0.000	0.000	0.000			
7	0.461	0.179	0.672	1.586	0.187	13.441			
8	-18.477	0.000	0.999	0.000	0.000	0.000			
9	-18.030	0.000	0.999	0.000	0.000	0.000			
10	-17.767	0.000	0.999	0.000	0.000	0.000			
11	-18.861	0.000	0.999	0.000	0.000	0.000			
12	3.604	6.047	0.014	36.743	2.078	649.678			
13	-18.030	0.000	0.999	0.000	0.000	0.000			
14	-18.030	0.000	0.999	0.000	0.000	0.000			
15	-18.171	0.000	0.999	0.000	0.000	0.000			
21	-17.253	0.000	1.000	0.000	0.000	0.000			
Don't know	-18.234	0.000	0.999	0.000	0.000	0.000			
Wife can refuse	sex (No=1.0)								
Yes	0.031	0.015	0.903	1.032	0.626	1.699			
Don't know/not sure/depends	2.102	12.283	0.000	8.180	2.525	26.500			
Wife can ask par	rtner to use a	a condom (No	= 1.0)						
Yes	.777	8.701	0.003	2.175	1.298	3.645			
Don't know/not sure/depends	577	0.400	0.527	0.561	0.094	3.357			
Constant	-3.981	233.270	0.000	0.019					
Source: GDHS (2022). Significant at 0.05.									

Table 7: Outcome of Binary Logistic Regression on Sex Partners Outside of Marriage and Condom Use Among Men in Ghana

After processing the data, only four (4) variables namely; number of sex partners, excluding spouse, in last 12 months, total lifetime number of sex partners, wife can refuse sex, and wife can ask partner to use a condom were significant. Those that were not significant were removed from the model (see Table 7). Overall, the logistic regression model was significant at -2LogL = 973.905; Nagelkerke R² of 0.077; χ^2 = 68.495; p<.001 with correct prediction rate of 95.6%. More importantly, the Model Summary which shows a Nagelkerke R² of 0.077 suggests that the model explains 7.7% of variance in the likelihood of condom use among men in Ghana. With this percentage contribution to the entire model, the results confirmed the whole model significantly predict men's condom use in Ghana.

It emerged in Table 7 that men who had one sex partner, excluding spouse, in the last 12 months was statistically significant related

to condom use at p = 0.005, (OR = 1.996, 95%CI ([1.225-3.251]). This factor categorises those men to have 1.9times more likely to use a condom compared with men that reported they had zero sex partner, excluding spouse, in the last 12 months. Further, it was found that men who had two sex partners, excluding spouse, in the last 12 months was statistically significant at P < 0.001, (OR = 5.680, 95%CI [2.584 - 12.485]). This variable labelled those men to have 5.7times more likely to use a condom compared with men that reported they had zero sex partner, excluding spouse, in the last 12 months (see Table 7). Furthermore, men that had three sex partners, excluding spouse, in the last 12 months more likely to use a condom compared with men that reported they had zero sex partner, excluding spouse, in the last 12 months was statistically significant at P < 0.001, (OR = 25.886, 95%CI [4.075-164.449]). This factor tags those men to have 25.9times more likely to use a condom compared with men that reported they had zero sex partner, excluding spouse, in the last 12 months was statistically significant at P < 0.001, (OR = 25.886, 95%CI [4.075-164.449]). This factor tags those men to have 25.9times more likely to use a condom compared with men that reported they had zero sex partner, excluding spouse, in the last 12 months (see Table 7).

The study found men who had total number of five (5) sex partners in their lifetime to be statistically significant at P = 0.033, (OR = 2.400, 95%CI [1.072-5.370]). This variable has described those men to have 2.4times more likely to use a condom compared with men that reported they had only one as the total number of a sex partner in their lifetime (see Table 7). Furthermore, men who had twelve (12) as the total number of sex partners in their lifetime was statistically significant at P = 0.014, (OR = 36.743, 95%CI [2.078-649.678]). This factor revealed those men to have 36.7times more likely to use a condom compared with men that reported they had only one as the total number of a sex partner in their lifetime (see Table 7).

It was found that men who reported that they do not know, not sure/ depends whether a wife can refuse sex was statistically significant to condom use at p < 0.001, (OR = 8.180, 95%CI [2.525-26.500]). This variable revealed those men to have 8.2times more likely to use a condom compared with men that reported wife cannot refuse sex (see Table 7). Additionally, the study found that men that reported that a wife can ask a partner to use a condom was statistically significant to condom use at p = 0.014, (OR = 36.743, 95%CI [2.078-649.678]). This factor labels those men to have 36.7times more likely to use a condom compared with men that reported a wife cannot ask a partner to use a condom (see Table 7). Moreover, statistically significant relationship was not found in the remaining variables which could be as a result of chance.

4. Discussion

The assessment of sexually transmitted infection (STIs) in Ghana brought to light that only 7.3% of the sample were infected with STIs in the last 12 months preceding the survey. STIs symptoms may appear a few days after exposure. So, it could probably be that those participants had an unprotected sexual intercourse outside marriage with an infected person and a few days later, they experienced genital burning sensation or a genital discharge which made them to conclude they have been infected with STIs. However, overwhelming majority (92.7%) were not infected with STIs in the last 12 months prior to the study. Many STIs have no symptoms or may only cause mild symptoms, so people can have the infection but might not know it. For, it is possible to have an infection and not know it. It could also be that those participants use the condom any time they want to have sex. Hence, they are aware of the repercussions of not using the condom to have sex. This finding is almost similar with a previous research finding that the prevalence of self-reported STIs in the past 12 months preceding the survey was 6.0% while those that were not infected were 94% [46]. The reason for the similarity could be due to the context and participants sampled. On the contrary, the findings refuted previous research finding which found prevalence of STI co-infections as 23.7% and 51% respectively [47,48]. The reason for the dissimilarity could probably be due to the statistical tools applied for the analysis.

The study found that few (6.6%) of the sample had genital sore/ ulcer in the last 12 months preceding the survey. This signifies that such individuals might have had unprotected sexual activity including close contact with skin and mucous membranes of the genitals, mouth, and rectum with an infected person. However, it was revealed that more than ninety per cent (93.4%) of the participants did not experience any genital sore/ulcer in the last 12 months indicating that they never had any unprotected sexual contact with infected people. If people prioritise good health, it makes it difficult for them to engage in unhealthy sexual acts which could have a detrimental effect on their health. This finding is almost similar to a study which found that 4.1% sexually active men reported having experienced genital ulcer symptoms in the previous 12 months [49].

Genital discharge is a symptom of STI which indicates an infection. Therefore, anyone that observes a discharge from the penis can right away conclude to have gotten STI. As a result of this, the study brought to bear that 7.2% of the sample had genital discharge in the last 12 months. This is an indication of an unprotected sex. It could be that those people do not value their health and that do not make healthy choices including healthy sexual acts which are a prerequisite to longevity. This finding refuted previous research [50,51] which found varied results 85% and 42.3% respectively. However, it was found that almost ninety-three per cent of the participants did not have any genital discharge in the last 12 months indicating that they did not engage in an unprotected sex.

To know more about STIs and other forms that exist can make a difference. It can go a long way to help people prioritise their health. With this, the study revealed that over eighty per cent of the participants have heard about other STIs in Ghana. This simply suggests that those individuals might be abreast of the causative agents or how the infection is transmitted and that might want to use a condom anytime they want to engage in sexual activity. This finding agrees with [52,53] study which found 87% and 83.1% respectively of participants who claimed to have heard about other STIs. However, those that indicated they had never heard about other STIs reason could be that they find it difficult to talk about STIs due to concerns about stigma.

The study found a relationship between history of STI infections and condom use among men in Ghana. Therefore, the null hypothesis was rejected. The relationship found between STIs and condom use among men revealed that both the explanatory (STIs) variable and the outcome (condom use) variable are not independent of each other. The chi-square value of 7.502 indicates that those participants who had heard about other STIs would be more concerned about their health and might not engage in any foul acts without being cautious. This finding refuted a previous study which found a negative relationship between risk lovers and using condom for STI protection [54].

The association found between heard about other STIs and condom use indicates that the more and more people hear about other STIs it is the more and more it would make them use a condom anytime they would want to have sex. Learning about other STIs, including the risk of being infected, can indeed encourage condom use among men, as it serves as a "cue to action" or a reminder of an importance of protective sexual acts. This finding disagrees with a previous study which found that STI history in the past year was associated with a reduction in condom use at last sex (OR 0.37, 95%CI; 0.16–0.89) [44].

The study found that more than eighty per cent of the sample did not have any extra sex partner excluding spouse, in the last 12 months. Sex partners outside of marriage is regarded as immoral. Therefore, those participants might have thought it is wise, not to engage in extramarital affairs outside of marriage. Not having any sex partner outside of marriage signifies that those participants are cautious of their health. Therefore, they do not want to involve in any extramarital sex. Hence, they might not be able to access condom to protect themselves from STIs. This finding disagrees with a study which found that only 16.4% of men reported having no sexual partner outside of marriage [55]. However, participants that reported that they had two extra sex partner excluding spouse, in the last 12 months reason could probably be that perhaps they thought consensual sexual acts (between, say, strangers) done simply for the sake of pleasure, or sexual acts done to express or signify nonmarital, romantic relationships, are worthwhile and morally permissible, even though their benefits are less profound than the good of marriage. Those individuals might claim that although marital intercourse does realise a distinctive good, nonmarital sex can equally realise other goods, even if on a lesser scale.

The study discovered that more than seventy per cent of the sample were with the view that a wife can justifiably ask a husband to use a condom. When a woman realises that her husband has sex partners outside of marriage, it could serve as a cue to action which might be reminding her to make sure her husband uses a condom anytime he might want to have an advancement towards her, just to prevents spread of STIs in case the man has it. The finding is almost similar to previous studies which found 68.9% and 67% of participants who graciously reported they can justifiably ask a husband to use a condom if there was cheating or a suspicion of cheating by the partner [56,57] respectively.

The study revealed varied average figures as the total lifetime number of partners. This suggests that the total lifetime number of sex partners, men could have differ based on culture, values, individual preferences, priorities, and experiences. Thus, when it comes to lifetime sex partners, there is no specific number of sexual partners that is universally considered a lot or too many partners. Everyone has his or her own personal opinion regarding the ideal number of sexual partners. What might constitute a high number of partners to one person might be considered average or even low to another person. This finding is similar to a study which found a varied average sex partners outside of marriage that about a quarter reported one or zero sexual partners as of Wave III, over half (57%) reported between one and eight partners, and 19% reported 9 or more [58].

The study brought to light that 69.0% of the study participants graciously cited that a wife can refuse sex. The presence of reduced

sexual drive caused by aging, poor physical health, unhealed sexual trauma, relationship issues as well as medical problems of women can lead them hate sex. This refuted a study which found just half (50%) of the study population that women can refuse sex against their partner [57].

The study found a statistically significant relationship between sex partners outside of marriage and condom use among men in Ghana. Therefore, the null hypothesis was not approved. The chi-square values of the significant variables indicate, a strong and positive relationship. This relationship demonstrates how sex partners outside of marriage could prompt condom use. Hence, condom use during an intercourse is considered effective for the prevention of STIs. This outcome corroborated with a study which found that men's condom use at last sex was much higher when the partner was a non-spouse, from 32% to 68% [59].

The study found that men who had multiple sexual partners, excluding spouse, in the last 12 months as well as an average multiple number of lifetime sex partners were more likely to use a condom. To avert STIs, there is a need to always use a condom during sexual intercourse. Since condom is noted to prevent STIs including HIV, individuals who do enjoy sex and cannot be faithful to their spouse, might as well, think about their safety regarding extramarital affairs outside of marriage and that could go on to use a condom anytime they want to have sexual intercourse outside of a marriage. Further, the findings suggest that having an extra sex partner outside of marriage increases the odds of prompt condom use among men for it is a practise of a healthy sex. Furthermore, men who had an average multiple number of lifetime sex partners were also more likely to use a condom. This unveiled that the more average number of sex partners one has it is the more and more it increases one's odds of using a condom. The plausible explanation could partly be due to that fact that no one wants to be taken unawares by STIs. Therefore, they endeavour to use a condom during an intercourse. Since, it is the only antidote that can help prevent one from contracting STIs. The findings refuted a study which found that participants who had multiple sexual partners are not likely to use condoms [60].

It was found that men who reported they do not know or not sure or it depends whether a wife can refuse sex were more likely to use a condom. These men might not want their wives to refuse them sex. Therefore, anytime they make their mind to have an intercourse with them, they put on a condom. For they know, it is a healthier sexual practice which if adhered to can help prevent STIs. Being fully aware that having more than one sex partner could influence the spread of STIs, and the only antidote to stop the spreading be a condom, could influence it usage.

The study found that an overwhelming majority who reported that a wife can ask a partner to use a condom were more likely to use a condom. Men that have extra sex partners outside of marriage are aware that the likelihood of contracting STIs is high. Therefore, they endeavour to use a condom so, that, their wives can be relieved of tension and threat of being infected with STIs. This finding has opened the lens that the more and more men are aware that their wives can ask them to use a condom during an intercourse increases their odds of condom use. this finding corroborated with a study that specifically, those who were able to ask their partners to use condoms during sexual intercourse had greater odds of consistent condom use [61].

5. Conclusion

The study attempted to analyse the influences STIs and sex partners outside of marriage have on men's condom use in Ghana. The two hypotheses postulated all suggested a relationship between STIs as well as sex partners outside of marriage and condom use among men in Ghana. It ap-peared a significant proportion of the sample were in-fected with STIs in the last 12 months preceding the survey. The study found varied average figures as the total lifetime number of sex partners among men in Ghana which might have predisposed them to be infected with STIs. Based on this, the study recommends that stakeholders, NGOs and other bodies that matter should endeavour to help educate the general public on the health needs of having a single sex partner in life and the adoption of condom use to help avert STIs in Ghana.

Declaration

Ethical Approval

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

Competing Interests

Authors did not register any conflict of interest.

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No fund was received.

Availability of Data and Materials

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

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