

Barriers To Use Of Dual Protection Among Married Women In A Suburban Setting

Mutowo Jesca¹, Kasu Christine Mary²

¹(Health Science Department, Zimbabwe Open University, Zimbabwe)

²(College of Health Sciences/ University of Zimbabwe, Zimbabwe)

Abstract: Dual protection use can play an important role in the prevention of unintended pregnancy and HIV infection. However, use of dual protection in married people is uncommon. The purpose of this study was to establish barriers to effective use of dual protection among married women in an urban setting. The descriptive design was used to guide the study. Face to face interviews were conducted with 80 systematically selected women of child bearing age. Descriptive and inferential statistics were used to analysed data. The major finding of the research was that condom use in married couples was very low (3.8%). Perceived utilization related problems (breakage, slippage, disruption of flow of sexual interaction) and trust issues were identified as barriers to condom use. The study recommends intensive health education awareness on the dual risk and the need to use condoms in marriages. Print and electronic media specifically targetting men can be used to disseminate information on dual protection and reproductive health issues in general. which specifically target men.

Keywords– Barriers, Dual protection, Family Planning.

I. Introduction

Much has been written about HIV and unwanted pregnancy and their impact on individuals, families, communities and countries. Given the evidence on the increasing incidences and prevalence of these two, it is vital for policy makers and health personnel to adopt strategies that deal with the two simultaneously. To address this dual risk in couples who do not want a child or who want to postpone childbirth, dual protection is the most prudent approach that should be advocated for [1]. Although dual protection is highly recommended, dual protection is not highly used [2], especially in married couples where issues of mistrust can be raised if condoms are mentioned [3]. Dual protection is defined as simultaneous protection against both unwanted pregnancy and sexually transmitted infections including HIV and sexually transmitted infections (STIs)[4]. It entails use of condom in combination with a highly effective pregnancy prevention method [1]. Effective pregnancy prevention methods include permanent (sterilization), long acting (intra- uterine device or implant), or hormonal (injection or oral) methods with condoms [4]. Effective family planning helps to reduce the number of high-risk pregnancies and reduces the need for unsafe abortion.

II. Background

Globally contraceptive use has risen from 54,8% in 1990 to 63,3% in 2010 and the contraceptive unmet need has declined from 15.4% in 1990 to 12,3% in 2010 [5]. Locally, according to the City of Harare Annual Report for 2010, family planning consumption increased from 28 329 in 2009 to 37 688 in 2010 [6]. However the annual target in the Zimbabwe National HIV and AIDS Strategic Plan 2006-2010 of 150 million of distributed male condom has not been achieved [7]. Annually, about 200 million women are infected with sexually transmitted infections [8]. These women are likely to be users of contraception. Hence, efforts to reduce the spread of HIV and STI among family planning clients are therefore likely to make significant contribution to the national effort considering the high number of women accessing contraceptive clinics. Zimbabwe is the third largest HIV burden in Southern Africa with a prevalence of 14.3% after South Africa and Mozambique [7]. HIV prevalence among women aged 15 to 49 in Zimbabwe is 18%[9]. High rates of unintended pregnancy and HIV infection prompt calls for use of dual protection.

Although condoms can be effective, there are some barriers that lessen their acceptability to some clients. The perception that they reduce sexual spontaneity, pleasure and the need to use them with every act of intercourse are some of the negative attributes of condom use [10]. In a study done in eastern Zimbabwe, myths raised about condom use included fears of safety for women, reduced sexual pleasure and/ or reduced performance in men [11]. According to Sexually active persons maybe unwilling to use two methods because of the perception that condoms are associated with sexually transmitted infections [12]. Although women at risk for sexually transmitted infections need to use condoms, unfortunately condoms alone are less effective for pregnancy prevention [13]. In the same context, though sterilization, hormonal methods and intra-uterine devices are effective contraceptives, they do not protect against STIs, hence the need for use of dual protection.

The purpose of the study was to examine barriers to effective use of dual protection among married women in an urban setting. Women have reported men's stubbornness and unwillingness to use either female or male condoms [12]. In a study done in Northern Ethiopia, though most respondents approved the use of condoms in married couples, about 30% disapproved, citing trust issues [3]. [15], concurs that one of the primary problems in actually using dual protection lies in the distrust between men and women. In Northern Ethiopia, participants reported that there was no discussion about HIV/AIDS among married and cohabiting partners [3]. Mistrust, shyness and fear of being thought unfaithful were reasons given for not talking about HIV. The perception that condoms reduce sexual spontaneity, pleasure and the need to use them with every act of intercourse are some of the negative attributes to condom use [10]. However [13], pointed out that having a male partner with a positive attitude about condoms is one of the strongest predictors of dual method use.

Decreased user libido and sexual enjoyment were strongly associated with hormonal contraception discontinuation in United States of America [15]. Pill use also requires a daily effort that may create problems of forgetfulness resulting in unplanned pregnancy hence the need to insist on the dual protection method. The contraceptive method mostly used in Zimbabwe is the pill (41%) followed by injectibles (8%), male condom (3%) and implants (3%)[9]. Although injectibles, implants and intra-uterine devices do not require substantial involvement of the user to be highly effective for pregnancy protection [10], they do not protect against STIs and HIV infection. When condoms are used perfectly, they have a pregnancy rate of 2% and when used with a pill has a pregnant rate of 0.3% [16].

2.1. Conceptual Framework

The Health Belief Model as a theoretical framework can be used to guide women to make realistic risk assessments and to identify positive ways of incorporating dual protection use into their sexual lives. The model views health behavior change as based on a rational appraisal of the balance between barriers to and benefits to action. According to this model (Fig 1), the perceived seriousness and susceptibility to a disease influences the individual's perceived threat [17]. Similarly, perceived benefits and perceived barriers influence perceptions of the effectiveness of a health behavior [18]. In turn, demographic and socio-psychological variables influence both perceived susceptibility and perceived seriousness, and the perceived benefits and perceived barriers to action [19]. It is assumed that if perceived threat is high and perceived benefits outweigh barriers, a cue to action can trigger an individual to adopt and maintain preventive behavior [20]. Cues to action include a diverse range of action which may be internal (example, physical symptom) or external (example media campaign or advise from others) to an individual [17].

It is believed that an individual will take a health related action (use dual protection) if one feels that a negative condition (HIV infection and / or unintended pregnancy) can be avoided. The individual also has positive expectation that by taking a recommended action she will avoid a negative health condition (use of dual protection will be effective in preventing HIV infection and unintended pregnancy) and beliefs that she can successfully take a recommended health action (she can use dual protection comfortably and with confidence).

Modifying factors include knowledge and socio-demographic factors that may influence health perceptions [21]. In this study, modifying factors were identified as age, socio-economic, education and cultural factors that influence whether the woman will negotiate for dual protection use or not. For example, if the woman has the knowledge on prevention and risk awareness it will affect perceptions of susceptibility, severity, benefits, barriers and self-efficacy.

Barriers can be physical (example, unable to apply condom), psychological (example religious or moral obligation forbidding birth control), emotional (example, embarrassment discussing condom use) or financial (example, cannot afford condoms or/ and contraceptives), sensational (example reduced pleasure and skin irritation), situational (example needing to have one available when needed), relational (example disrupting the flow of sexual interactions), or functional (example concern about breakage or slippage). Perceived barriers to condom use according to [11] and [12], include difficulty in getting partners to use condoms, decreased sexual pleasure, unavailability, embarrassment of purchasing and using condoms and difficulty in discussing condom use with partner. Literature has shown that individuals who report these barriers to using condoms are less likely to use condoms consistently because the perceived barriers to condom use outweigh the perceived benefits of using condoms.

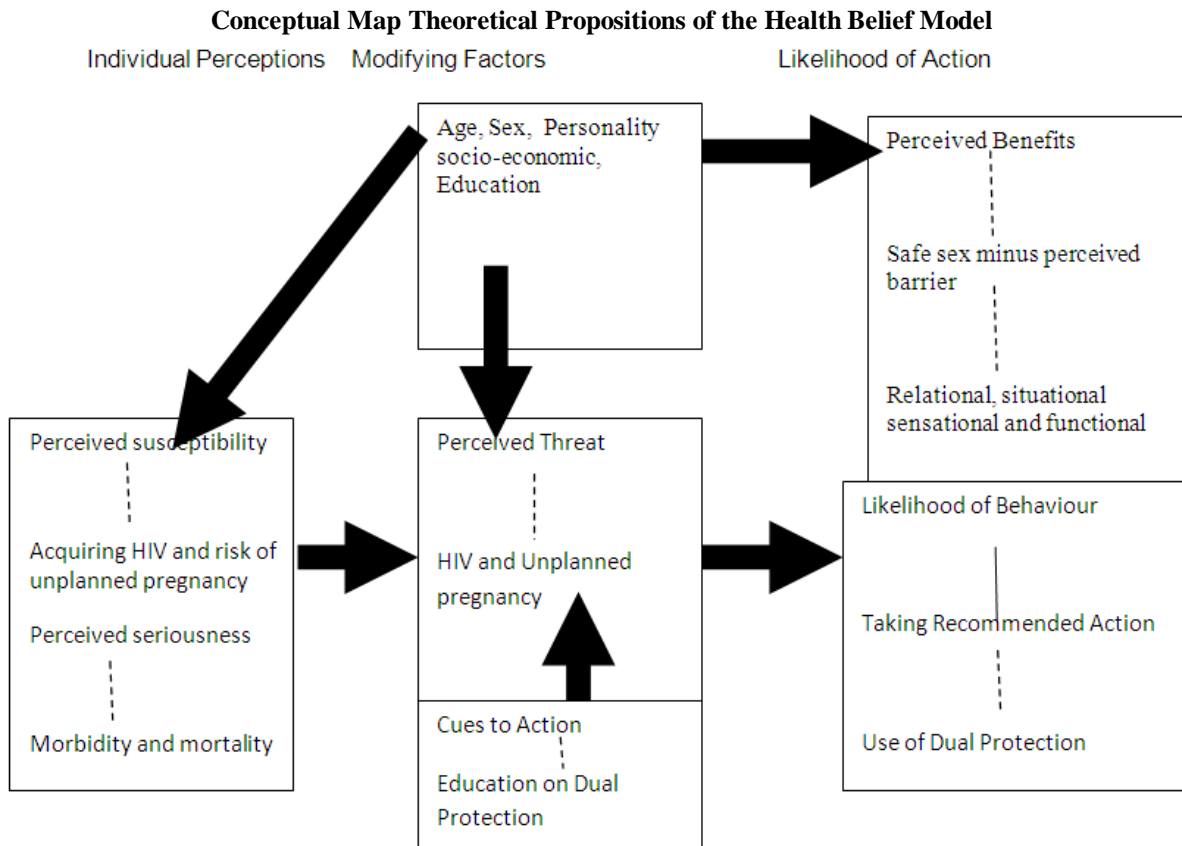


Figure 1: Health Belief Model Adapted from [21].

It is assumed that if perceived threat is high and perceived benefits outweigh barriers a cue to action can trigger an individual to adopt and maintain preventive behavior [20]. Cues to action (knowledge from health personnel) would activate the readiness and stimulate overt behavior.

III. Methodology

The data for this descriptive study was obtained from women of childbearing age using modern methods of family planning at a Family Health Clinic in an urban setting. Systematic sampling method was used to recruit 80 women who were fluent in English and / or Shona. Face to face interviews were conducted. The clinical experts at the clinic assessed content validity of the instrument. Reliability was ensured by pretesting the instrument and making sure same questions, wording and sequence was used for all participants. The interviews were conducted in a quiet room to control extraneous variables such as noise. Internal consistency of the measuring instrument was evaluated by calculating the Cronbach's alpha. In this study, Cronbach's Alpha coefficient ranged between 0.7322 and 0.7350. Ethical clearance was sought from the Joint Ethics Committee, Medical Research Council and from the study site authority.

Respect for human dignity was observed by respecting right to self-determination and full disclosure. The investigator explained the purpose of the study, likely risks and benefits, how subjects were selected, and expectations as regards to voluntarism, confidentiality and freedom to withdraw from the study any time without any penalty. The investigator ensured all participants were treated fairly and their privacy maintained. No names were written on the interview schedule, instead identification numbers were assigned to each questionnaire. The explanations were in simple language that was understood by the participants. All participants signed and received a copy of an informed consent and the researcher retained a copy. Contact details of the investigator were given to participants in the event that they needed any clarification on matters pertaining to the study.

The investigator filled in the interview schedule and each interview lasted 20-25 minutes. Collected data was stored in a locked cupboard accessible only to the investigator. Data was analyzed using both descriptive and inferential statistics. Descriptive statistics were used to analyze demographic variables and barriers to condom use. Measures of central tendency such as the mean, median and mode, frequency distribution percentage and measures of dispersion such as standard deviation were used to describe the data. Social Science Packaging System (SPSS) was used to analyze data.

IV. Results

The age of participants ranged between 18 to 46 years. The mean age was 27 years and standard deviation 6.7 years.

Fifty (62.5%) of the participants used the pill, 11 (13.8%) used injectibles, 7 (8.8%) were on implants and 6 (7.5%) were on condoms alone. Three (3.8%) of the participants used a natural method (lactation amenorrhea), a further 3 (3.8%) reported using condoms and another family planning method. No participant reported using the loop or sterilization. Fifty-three (66.3%) reported that they were satisfied with current method of family planning and 27 (33.7%) were not satisfied.

Participants who indicated that they were satisfied with their current method of family planning cited more than one response and their responses were: protection against pregnancy 7 (13.2%), partners/ husbands were agreeable 4 (7.5%), easily accessible 10 (18.9%), easily accessible 10 (18.9%), 22 (41.5%) easy to use, cheap 2 (3.8%), prevented HIV infection 5 (9.4%) and were not experiencing any side effects 22 (41.5%).

Table 1. illustrates problems faced by the 27 (33.7%) participants who indicated that they were not satisfied with their current method. Participants were allowed to cite more than one response, but they cited one response each. Fourteen (51.9%) of the participants complained of spotting. Painful breast, headache, nausea and inability to prevent HIV infection were reported by one participant each (3.7%). Three (11.1%) of the participants reported loss of libido, two (7.4%) reported amenorrhea and 4 (14.8%) of the participants reported forgetfulness.

Forty-eight (60.0%) of the participants said that they had received instructions on condom use from health personnel and 32 (40.0%) had not received any instructions on condom use from health personnel.

Table 1: Problems with Family Planning Methods

N=27n> N (participants were allowed to cite any number of answers but they each cited one)

Variable	Frequency (n)	Percentage (%)
<u>Problem faced with FP method</u>		
Forgetfulness	4	14.8
Headache	1	3.7
No HIV prevention	1	3.7
Nausea	1	3.7
Loss of libido	3	11.1
Amenorrhea	2	7.4
Spotting	14	51.9
Painful breast	1	3.7

Some participants reported facing some barriers with male condom use (Table 2). Participants were allowed to cite more than one response. Barriers to male condom use (Table 2) were reported as; 5 (6.3%) reduced pleasure, 7 (8.8%) skin irritation, 13 (16.3%) breakage, 12 (15.0%) condom slippage and 10 (12.5%) disruption in the flow of sexual interaction. Three (3.8%) of the participants reported other barriers as 2 (2.5%) partner/husband reporting condom was too tight and 1 (1.3%) lubricant smelly. Barriers to female condom use (Table 3) were cited as reduced pleasure 2 (2.5%), skin irritation 4 (5.0%), slippage 5 (6.3%), disruption of flow of sexual intercourse 1 (1.3%) and difficult in putting it on 2 (2.5%). All three (3.8%) who indicated others reported that the rings on the female condom caused pain. Sixty-six (82.5%) had never used the female condom.

Sixty-one (76.3%) of the participants indicated that their partner/husband sometimes agreed to use condoms, 10 (12.5%) of the participants indicated that their partner/husband never agreed to use condoms and 9 (11.2%) indicated that their partner/husband always agreed to use condoms. Seventy-six (95.0%) of the participants had easy access to condoms while only 4 (5.0%) had some difficulties in accessing condoms.

Table 2: Barriers to male condom use (2)

N=80 n>N (Participants were allowed to cite more than one answer)

Variable	Frequency (n)	Percentage (%)
<u>Barriers to male condom use</u>		
None	25	31.3
Reduced pleasure	5	6.3
Skin irritation	7	8.8
Breakage	13	16.3
Slippage	12	15
Disrupting flow of intercourse	10	12.5
Difficult to put it on	0	0.0
Others	3	3.8
Can not say. Never used any	10	12.5

Table 3: Barriers to female condom use (3)
N=80 n>N (participants were allowed to cite more than one response)

Variable	Frequency (n)	Percentage (%)
Barriers to female condom use		
None	9	11.3
Reduced pleasure	2	2.5
Skin irritation	4	5
Breakage	0	0.0
Slippage	5	6.3
Disrupting flow of sexual interaction	1	1.3
Difficult to put it on	2	2.5
Others	3	3.8
Can not say. Never used any	66	82.5

Participants suggested what could be done to involve men in dual protection. Thirty-eight (47.5%) of the participants suggested that partners/ husband should also come with their wives to the clinic especially during ante-natal care so that they can receive the same information from health personnel and also get couple counseling and testing on HIV. Twenty-one (26.3%) of the participants suggested that health personnel should visit workplaces and share information on dual protection with men since they are not willing to come to public health institutions where most awareness are conducted. They also suggested use of both the print and electronic media and fliers to disseminate information on use of dual protection. Sixteen (20.0%) of the participants suggested improved communication within the family about safer sex practices. Five (6.2%) of the participants did not know what would improve male involvement in use of dual protection.

V. Discussion

Dual protection was only practiced by 3.8% and only 7.5% used condoms as the primary and only contraceptive method. Thus condom use on a regular basis was only 11.3%. These findings are consistent with [23], who state that in Zimbabwe, condom use with a spouse/ partner is a rare event, with only 6% of men and 4% of women reporting such behavior. Such low condom use levels could be a result of real barriers.

In this study, barriers to male condom use were listed as; reduced pleasure 5 (6.3%), skin irritation 7 (8.8%), breakage 13 (16.3%), slippage 12 (15.0%) and disrupting the flow of sexual interaction 10 (12.5%). Barriers to female condom use were reported as reduced pleasure 2 (2.5%), skin irritation 4 (5.0%), slippage 5 (6.3%) and 2 (2.5%) indicated that the female condom was difficult to put on and 3 (3.8%) reported that the rings on the female condom made it painful to insert. According to the Health Belief Model [21], barriers to condom use influence perception of condom effectiveness especially if the barriers outweigh benefits and this may affect cue to action. The reasons given for not using condoms show that there are strong negative perceptions around condom use that prevent them from being used. Barriers to condom use were consistent with those from another study done in Zimbabwe [11], where participants reported reduced pleasure and the need to use them with each encounter. Barriers to condom use varied with individuals, therefore interventions have to be individualized and multifaceted to overcome the different barriers to use of condoms in family planning clients, as these seem to affect use of dual protection.

Only 29 (36.2%) had received information on dual protection from a health worker and 51 (63.8%) did not receive any information, hence the low utilization. The results show that health education on dual protection was suboptimal. Fifty-three (66.3%) were satisfied with the current method of family planning while 27 (33.7%) were not satisfied. Satisfaction with method of choice plays a part in adherence to the method. Those who were satisfied with the current method listed the reasons as, easy to use 22 (41.5%), likelihood of partner agreeing 4 (7.5%), easy access 10 (18.9%), cheap 2 (3.8%), and absence of side effects 22 (41.5%). Perceived benefits of the current method seem to outweigh the barriers hence the satisfaction with the method leading to maintenance of the preventive action (taking the contraception). Participants who indicated that they were not satisfied with current method of family planning listed the reasons as spotting 14 (51.9%), forgetfulness 4 (14.8%), headache, painful breasts, does not prevent HIV infection and nausea had 1 (3.7%) each and loss of libido 3 (11.1%). Amenorrhea was reported by 2 (7.4%) participants. According to the Health Belief Model [21], if perceived barriers outweigh the benefits there is likelihood that the participants would switch to another contraception or discontinue contraception completely risking unintended pregnancy. These results on barriers to contraception use are consistent with results from other studies [15] and [10], in which participants reported decreased libido, reduced sexual enjoyment, forgetfulness and inability to protect against STIs and HIV infection.

In this study, it is assumed that women are aware that unsafe sex practices increase their risk of unintended pregnancy and contracting STIs and HIV infection, although they may not necessarily understand behaviors that will empower them to effectively reduce their risk. Risk reduction behavior in this study is conceptualized broadly as changes that women might view as effective, such as reducing number of sexual

partners as well as use of dual protection. It is predicted that those individuals who perceive themselves at greater personal risk will have enacted sexual risk reduction behaviors, provided that they have been cued to action through their worry of unintended pregnancy and/ or contracting STIs including HIV infection.

All the participants were aware that they were at risk of acquiring the infection, yet only a few were using condoms. Perceived risk was likely not a driving force in behavioral change in this sample. Most participants highlighted a number of barriers to condom use such as loss of sensation, refusal by one partner to use condoms and prohibitive cost. Results were consistent with results of studies conducted in Nigeria [24], in which perceived barriers were found as being the strongest predictors of condom use.

Fifty-two (65.0%) of the participants did not think using a condom was a sign of mistrust. These results show that other reasons could be the cause of low dual protection use and not due to participants not trusting their partners/husbands. In this study, the majority 76 (95.0%) reported easy access to condoms. Therefore non-use of condoms was not due to accessibility. The results are consistent with findings from a study [22], that revealed that condom access was not a major reason for not using them.

Twenty-nine (36.2%) and twenty-three (28.8%) thought they were at high and moderate risk respectively for STI and HIV. The Health Belief Model predicts that as an individual's level of risk assessment increases, chances of compliance with recommended prevention measures also increases [25]. Contrary to results from a study carried out in South Africa [26], where participants' perceived risk of infection was predictor to condom use, participants in this study's perceived risk of STI including HIV infection from partner/ husband and access to condoms did not emerge as the predictor of condom use.

Only 32 (40.0%) had discussed dual protection with partner/ husband. According to [3], couples who communicate openly about safer sex practices are more likely to reduce behavioral risks than couples who do not discuss. Forty-eight (60.0%) did not discuss dual protection with their partners/husbands and this could be due to attitudes towards dual protection, or lack of assertiveness. Of those who received information on dual protection, all 29 (100.0%) said the information received helped them in negotiating for safe sex. Hence, health education talks are an important strategy in empowering women, giving them relevant information so that they can articulate issues properly and negotiate for safe sex.

Considering barriers to condom use (breakage and slippage) raised in this study, use of condoms alone as a method of preventing HIV and unintended pregnancy would not be effective, hence the need to use another effective contraception simultaneously with a condom. Twenty-one (26.3%) suggested health education should be intensified by using both print and electronic media and using fliers with messages on use of dual protection. Sixteen (20.0%) of the participants suggested improved communication in the family about safe sex practices. According to [3], communication about dual risk among couples is an important predictor of dual method use, hence the suggestion by the participants indicates an area that needs intervention.

In this study, the participants were aware that unsafe practices increase the risk of unintended pregnancy and contracting sexually transmitted infections including HIV infection (perceived susceptibility). Twenty-nine (36.%) were aware that they were at risk of acquiring HIV infection, yet only a few were using condoms consistently 9 (11.2%). Their likelihood of taking recommended action was low. These participants need information on advantages of dual protection so that they could address and adopt preventive behaviors.

Contrary to results from a study from Benin [27], in which participants did not believe in the efficacy of condoms, in this study 49 (61.2%) and 44 (55.0%) participants believed in the efficacy of condoms in prevention of pregnancy and transmission of STI including HIV respectively. The study revealed that only 36 (45.0%) knew what dual protection was but the participants did not convert this knowledge to condom use.

A cue to action in this study was the information the participants received from health personnel on dual protection and sexual and reproductive health. Results show that discussion on condom use was construed as confession of infidelity hence information received was not communicated to partner/ husbands, placing the participants at high risk of unintended pregnancy and contracting HIV. Based on the HBM, failure to use dual protection in this study was related to perceived barriers and attitudes.

VI. Conclusion

The results of this study provide evidence that although the use of modern methods of family planning has been embraced by many 77 (96.3%), the use of dual protection was very low 3(3.8%) among the study sample. This is not surprising since 51 (63.8%) never received information on dual protection and 48 (60.0%) had never discussed dual protection with partner/husband. Also 10 (12.5%) participants' partners /husbands never agreed to use condoms and only 9 (11.2%) of the participants indicated that their partners/ husbands always agreed to use condoms. These findings imply that there is lack of awareness of the dual risk and ultimately leading to low utilization of dual protection exposing women to unintended pregnancy and risk of transmission of STI including HIV. The study, therefore, recommends intensive condom use awareness in all health care services regardless of care sought Men can be targeted in the work place and be educated on the need for dual protection. Health promoters can develop health information for both print and electronic media

that specifically target men, so that they can be active participants in dual protection and reproductive issues in general.

References

- [1]. Chakrapani., V, Kershaw., T, Shunmugam., M, Newman., P.A, Cornman., D.H & Dubrow., R (2011). Prevalence of and barriers to dual-contraceptive methods use among married men and women living with HIV in India. *Infectious Diseases in Obstetrics and Gynecology*. Volume 2011.
- [2]. Sales., J.M, Whiteman., M.K, Kottke., M.J, Madden., T & DiClemente., R.J (2012). Dual protection use to prevent sexually transmitted infections and unintended pregnancy. *Infectious Diseases and Obstetrics and Gynecology*. Volume 2012. Article ID 972689, 2pages. Accessed 19/12/14
- [3]. Teklu. T., & Davey. G. (2008). Which factors influence North Ethiopian adults' use of dual protection from unintended pregnancy and HIV/AIDS? *Ethiopian Journal of Health Development*; 22 (3): 226-231.
- [4]. Berer, M. (2006 Nov.). Dual protection: More needed than practiced or understood. *Reproductive Health Matters*. 14(28), 162-170.
- [5]. Alkema, L, Kantorova., V, Menozzi., C & Biddlecom., A (2013). National, regional and global rates and trends in contraceptive prevalence and unmet need for family planning between 1990 and 2015: A systematic and comprehensive analysis. *Lancet* 2013; 381: 1642-52. Accessed 27/01/15.
- [6]. City of Harare. (2010). Annual Report of the Harare City Health Department. Harare. Zimbabwe.
- [7]. Fraser, N., Herling, K. A., Marelize, G., James, V., Milanzi, A., Calvin, M., Ibbetson, H., Mpofu, N., & Nzima, M. (2010). Zimbabwe Analysis of HIV Epidemic, Response and Modes of Transmission. National Aids Council, The World Bank, UNAIDS. Zimbabwe Ministry of Health and Child Welfare.
- [8]. UNFPA Fact Sheet (2014). Adding it up; Investing in sexual and reproductive health. Guttmacher Institute
- [9]. Zimbabwe National Statistics Agency. (2010-2011). Zimbabwe demographic and health survey. Harare. Zimbabwe Government Printers.
- [10]. McMahon, S., Hansen, L., Mann, J., Sevigny, C., Wong, T., & Roache, M. (2004). Contraception. *Bio Medical Central Women's Health*; 4 (Supplementary 1): S25.
- [11]. Duffy, L. (2005). Culture and context of HIV prevention in rural Zimbabwe: The influence of gender inequality. *Journal of Transcultural Nursing*; 16 (23).
- [12]. Mantell, J. E., Hoffman, S., Exner, T. M., Stein, Z. A. & Atkins, K. (2003 Mar/Apr). Family planning providers' perspectives on dual protection. *Perspectives on Sexual and Reproductive Health*, 35 (2).
- [13]. Pazol, K., Kramer, M. R., & Hogue, C. J. (2010 Apr/Mar). Condoms for Dual Protection: Patterns of use with highly effective contraceptive methods. *Public Health Reports*, 125.
- [14]. Chimbiri, A.M. (2003 July). The condom is an "intruder" in marriage: Evidence from rural Malawi. Paper presented at a seminar on Taking stock of the condom in the era of HIV / AIDS in Gaborone. Unpublished.
- [15]. Higgins, J. A., Hoffman, S., Graham, C. A., & Sanders, S. A. (2008 Dec). Relationships between condoms, hormonal methods, and sexual pleasure and satisfaction: An exploratory analysis from the women's wellbeing and sexuality study. *Sex Health*, 5(4): 321-330.
- [16]. O'Leary, Ann. (2011). Review article. Are dual method messages undermining STI/HIV prevention? *Infectious Diseases in Obstetrics and Gynaecology*. Volume 2011, Article ID 691210, 7 pages. Doi: 10.1155/2011/691210. Retrieved 22/12/11.
- [17]. Charles, A., & Poschal, S. (2005). Health Belief Model. In Conner, M., & Newman, P. (2nd Ed.), *predicting health behaviour: Research and Practice with Social Cognition Models* (pp. 28-67). New York. USA: Open University Press.
- [18]. Adih, W. K., & Alexander, C. S. (1999). Determinants of condom use to prevent HIV infection among youth in Ghana. *Journal of Adolescent Health*, Volume. 24(1).
- [19]. Munro, S., Lewin, S., Swart, T., & Volmink, J. (2007). A review of health behaviour theories: How useful are these for developing interventions to promote long term medication adherence for tuberculosis and HIV/AIDS. *Bio Medical Central Public Health*, 7:104.
- [20]. Seboka- Mma, L. (2009). Assessment of risky sexual behaviours with respect to HIV among South African young adults. Unpublished Dissertation.
- [21]. Champions, V.L., & Skinner, J.S. (2008). Health Belief Model. In Glanz, K., Rimer, B. K., & Viswanath, K. (4th Ed.), *Health Behaviour and Health Education: Theory, Research and Practice* (pp. 46-62). Jersey: Bass.
- [22]. Kleinschmidt, I., Maggwa, N. B., Smit, J., Beksinska, M. E., & Rees, H. (2003). Dual protection in sexually active women. *South African Medical Journal*, 93 (11): 854-7.
- [23]. Mumtaz, Z, Slaymaker., E & Salway., S (2004) Condom use in Uganda and Zimbabwe: Exploring the influence of gendered access to resources and couple- level dynamics. MEASURE Demographic and Health Surveys (MEASURE DHS)
- [24]. Agweda, T. O., Dibua V, A., & Eromonsele, A. O. (2010). Attitudes of youths towards the use of condom in heterosexual intercourse in Ekpoma, Nigeria. *Journal of Social Science*, 24 (3),169-176.
- [25]. Mattson, M. (1999 Sept). Toward a re-conceptualization of communication cues to action in the Health Belief Model: HIV test counselling. *Communication Monographs*, 66.
- [26]. Maharaj, P., & Cleveland, J. (2005). Risk perception and condom use among married and cohabiting couples in Kwazulu Natal, South Africa. *International Family Planning Perspectives*, 31 (1): 24-29.
- [27]. Houtton, S. H., Carabin, H., & Henderson, N. J. (2005). Towards an understanding of barriers to condom use in rural Benin using Health Belief Model: A cross sectional survey. *BMC Public Health*, 5(8) doi 10: 1186//1471-2458-5-8.