Psychosocial Attributes of Safe Sex Behaviour to Prevent HIV Infection among Women in South Eastern Zone of Tigray

Chalachew Wassie Wollie 8

Abstract

This research seeks to contribute to the knowledge base used when designing health promotion or disease prevention programs that promote safe sex practices among sexually active women. A total of 240 females who are sexually active (15 to 49 years of age) were randomly selected. A composite measure of psychosocial attributes of safe sex behaviour namely the perceived susceptibility, the perceived severity; the perceived benefits and the perceived self-efficacy of condom use were used to gather the required data. Decision making index, perceived barriers of safe sex behaviour were also used to collect data. Interviews and Focus Group Discussions (FDG) were also used to strengthen the quantitative data. Descriptive statistics, factor analysis, Univariate Analysis of Variance (UNI-NOVA) and Linear Regression were employed to analyze the datasets. Mass media, especially imparting HIV/AIDS education through TV spots, reality shows and drama have been found to be the most important source of knowledge about condom use. The factor analysis produced personal and sociocultural barriers of safe sex behaviour. The result reveals that the respondents relatively perceived personal attributes as potential barriers of condom use more than the sociocultural attributes. Marital status had statistically significant main effects on safe sex behaviour, where those who are married were less likely to use safer sex practice than their single counterparts. Decision making power, perceived severity and perceived benefits of condom use predicted the protective condom use among women. The results of the study provided an insight on how respondents' safe sex behaviour are affected by contextual and psychosocial variables with recommendations for developing individual and/or community based sexually transmitted disease preventive programs accordingly. These would further enable sexually active women to make an informed decision about unprotected sex and promoting oneself for positive image of condom use.

8 Department of Psychology, College of Social Sciences and Languages, Mekelle University, Mekelle, Ethiopia, E-Mail: chalwww2008@yahoo.com

Key Words: *Safe Sex Behaviour, Personal Factors, Decision Making Index, Interaction Effects*

Background and Justifications

According to the WHO report (2004), AIDS is the utmost leading cause of death of people in Africa and ranks fourth amongst the deadliest diseases globally. The report published in 2008 by the Ministry of Health of Ethiopia also indicates that approximately 1,345,970 people were living with HIV. The distribution of HIV infection rates by age groups and sex can indicate the transmission levels in sexually active population and thus guide prevention programs (Kloos, Damen and Lindtjorn, 2007). In particular, women are more likely to become infected and more often adversely affected by HIV/AIDS than men for many reasons: biological, sociocultural, and economic are few to mention. Women are also over-represented among the HIV/AIDS infected people and the gap between women and men is increasing (Wach and Reeves, 2000). Beyond abstinence and faithfulness, condom use is currently the only practical solution to reduce the risk of HIV infection. Yet, current condom use in the adult population is low and does not exceed 5 percent (UNAIDS, 2003; WHO, 2003; UNAIDS, 2004).

In this regard females and married women are at greater risk than the other segments of the society. The most important reasons for higher HIV infection rates of women in Sub Saharan Africa among others include higher susceptibility of women to sexually transmitted diseases (Murray and Lopez, 1998; UNAIDS, 2000); low status of women associated with lack of decision making power and access to financial resources; prejudiced expectations of men and submissive behaviour of women with regard to the social tolerance of high-risk sexual behaviour of men. In such a context, low self-efficacy beliefs of women are developed so that they may more often engage in unsafe sex practices than they would like to (Maharaj and Cleland, 2004). Some studies show that these reasons also apply to Ethiopia (Beyene *et al.*, 1997).

Most society socializes girls in a way to prepare them for a subordinate position to their future husbands and to other men in their environment. Although women do not want to engage in unsafe sex, it could be interpreted by men as a marital offence - giving way to domestic and sexual violence (Chuulo, 2001; Macmillan, 2002). Thus, the husband-wife bond is often under great pressure of male supremacy and such social arrangements are not really conducive to the advancement of women and their negotiation position regarding safe sex practice.

Prior researches reported by Alemu (2001) and Kloos and Damen (2000) indicated that culturally sanctioned gender roles that circumscribe women's sexual rights in marriage render them vulnerable to HIV infection. This would take the author of this paper to keep on arguing that in Ethiopian culture there is little or no communication over sexual and related matters. Where there is such a big gap of social regularities of the power balance of men and women, females are, to a greater extent, economically dependent on men. It is unlikely that there will be a practice of safer sex that comes through communication. Such a situation is an indicator to the role that contextual and psychosocial factors play in safe sex practices in Sub Saharan Africa in general and Ethiopia in particular. Moreover, it seems reasonable to expect that effects of these factors will vary according to a person's perception and sociocultural factors.

Previous research works reported by Conner and Armitage (1998) and Denison (2003) focus on the role of contextual determinants whereby demographic and socio-economic factors attribute as correlates of condom use, downplaying psychosocial factors. They can be more appealing to health policy makers because, compared to psychosocial attributes, they often are more visible so that they could be used for the profiling of target groups for HIV/AIDS programs. Therefore, it becomes important to include contextual factors in the analyses of sexual behaviour in Eastern settings (Airhihenbuwa, 1995; Bruijn, 1999). Few studies systematically examine these psychosocial and contextual attributes in conjunction (e.g., Groenewold *et al.*, 2005). Previous research work reported by Adih and Alexander (1999) identified psychosocial attributes as important determinants of condom use. These include perceived

susceptibility and severity, perceived benefits and perceived self-efficacy to use condom. This paper takes up those attributes and related factors.

Therefore, this research examines to what extent psychosocial attributes (perceived severity, perceived susceptibility, perceived benefit, perceived self-efficacy) and contextual factors (demographic and socio-economic characteristics) affect safe sex behaviour (condom use) of women in South Eastern Zone of Tigray, and what the implications are of the findings for HIV/AIDS intervention programs.

Statement of the Problem

Given the AIDS pandemic across Africa, researchers are trying to understand the social context in which people are likely to take precautions to protect themselves against HIV infection. Safe sex is defined as the process by which sexual partners and sexually active persons try to diminish the possibility of the transmission of the virus. Safe sex behaviour lacks a set of reliable and easily measurable standards because it has a more complex set of determinants. Abstinence, faithfulness and condom use are often ways to avoid or reduce the risk of HIV infection. Condom use directly links current safe-sex behaviour to a long-term outcome (UNAIDS, 2001; Bertrand and Escudero, 2002). In the present research, the focus is on the condom use component of protective/safe sex behaviour.

With regard to the determinants of sexual behaviour, the theory of planned behaviour is more exemplified (Ajzen, 1991; Ajzen and Fishbein, 2004). The theory argues behaviour depends on what a person's beliefs are about a particular behaviour (e.g. condom use). Such beliefs affect the attitude towards the behaviour and the intention to perform the behaviour. In the formation of intentions, the behaviour of important others are also taken into account. In later versions of the theory, the notion of perceived behavioural control was included, inspired by the notion of self-efficacy from social cognitive theory (Bandura, 1997). According to this theory, human behaviour is the product of the dynamic interplay of cognitive, behavioural and environmental influences called reciprocal

determinism whereby self-efficacy is considered the core determinant of behaviour. In tandem with this, psychosocial factors (e.g. self efficacy, perceived severity and susceptibility, attitudes to condom use) that might influence women's sexual behaviour have received little attention (Morrill *et al.*, 1996).

The self-efficacy construct was integrated in later versions of Health Belief Model (Rosenstock *et al.*, 1994). Applied to the context of safe sex behaviour, a person will use condom if he/she: (1) perceives that HIV infection has serious consequences for one's health (perceived severity); (2) perceives to be at risk of infection (perceived susceptibility); (3) concludes, after considering the pro's (perceived benefits) and con's (perceived barriers) of condom use; and (4) perceives to be capable of successfully using condoms now and in the future (perceived self-efficacy). A study reported by Yadeta *et al.* (2011) indicated that those who lacked self-efficacy in condom use were about three times more likely to have unprotected sex than those who had good (high) self-efficacy. However, there is little research that gives complete insight on psychosocial attributes of safe sex among women in our context.

Condom use can prevent infection with HIV and other sexually transmitted disease, with which practitioners have designed interdisciplinary efforts, oriented by behavioural prediction models, to persuade people to use condom consistently. For example, the health belief model (Rosenstock *et al.*, 1994) posits that increasing perceptions of vulnerability to HIV infection should increase precautionary behaviour. Yet previous researchers found that chronic perceived vulnerability to HIV infection in members of high risk groups (e.g., women) is insufficient to motivate protective actions (Albarracin *et al.*, 2001). On the other hand, previous research reported by Yadeta *et al.* (2011) found that those who had low self-efficacy to use condoms were more likely to have unprotected sex. The limited support for the perceived-risk of condom use suggests a need for further research particularly on the determinants of psychosocial factors (or attributes) about safer sex behaviour among women.

The other striking issue is the decision making power of women in sexual matters and safer sexual practices. Gender, as social and cultural attribute, contributes to peoples' mental schemes and influence their decisions and behaviour including sexual behaviour. Gender varies by culture, making it a fundamental dimension of social stratification (Bertand and Escudero, 2002). This makes it difficult to clearly measure its effect. The role of gender can partially be captured by the decision-making power of women in health and their resilience against sexual violence between spouses or partners (Blanc, 2001). Women who have more decision making power in family matters and reject forms of violence against women are the ones most likely to practice safe sex. Previous research work reported by Yadeta *et al.* (2011) found that those who had little discussion about safe sex were more likely to have unprotected sex. However, there is little comprehensive research how decision making index would have the predictive value of the perceived benefits and self-efficacy of condom use on female population. This takes up this concern in that how decision making index of women would affect the protective use of condom in our own contexts.

Taken together, many programs and interventions were designed without considering psychosocial attributes that maintain safe sex behaviour among partners, particularly women who are over-represented among the poor and among the HIV/AIDS infected people (Wach and Reeves, 2000). Yet, several researches stress the importance of contextual variables (demographic and socioeconomic measures), downplaying the psychosocial forces, in order to facilitate the development of intervention programs. The contextual attributes (compared to psychosocial measures) are often more visible and they could be used by policy makers and social practitioners for the profiling of target groups for HIV/AIDS intervention programs. The current research addresses these concerns by considering psychosocial and contextual attributes simultaneously that can be used, on balance, for the development of contextually and socio-culturally appropriate interventions and sexually transmitted disease preventive programs.

Therefore, the present research has five objectives: (1) to identify women's sources of knowledge about HIV/AIDS protective effects of

condom use; (2) to examine the perceived barriers of safe sex behaviour; (3) to identify the relative potential perceived barriers of protective safe sex behaviour of women; (4) to examine to what extent demographic attributes (age, income level, education, marital status, occupation) affect safe sex behaviour of women; and (5) to test whether there exists relationships between psychosocial factors (perceptions of threat, perceived benefits, perceived self-efficacy) and safe sex behaviour.

Research Methods

Research Design

The study comprised a combination of qualitative and quantitative research approaches with triangulation of data collection methods within the theoretical and conceptual framework of the research. The qualitative inquiry focused on relatively small samples selected purposefully. In this regard, it is important to uncover and describe women's views and opinions in-depth about safer sex behaviour in context. On the other hand, quantitative methods used statistical techniques so that predictive generalization can be inferred.

Sampling and Sampling Technique

The population of the study was females, who are sexually active (15 to 49 years of age), of the South Eastern Zone of Tigray. The target population was exclusively urban areas of the Zone. According to the administrative structure of the region, Kebele, which consists of at least 500 families/households, is the smallest administrative unit. Station (Ketena), which constitutes of blocks, is the smallest administrative unit within Kebele. To select respondent samples, the research population was divided by four local districts namely Seherti Samre, Hintalo Wajirat, Enderta and Dega Tembel (Hagereselam). Hagereselam was randomly selected. Then after, the selected local district was classified by two Kebeles and five stations (Ketenas). Eventually, representative samples were randomly drawn from each station. In total, 240 samples, 48 from each Ketena were included for sample respondents so that comparative analyses can be made. A multi-stage random sampling is preferred because the researcher

believes that the exclusion of local districts and stations would not affect the results of the study.

The samples were of different backgrounds. Respondents with age categories between 15-29 years were 182 (75.5%), and those respondents between 30-39 years were 17 (19.5%). The remaining 12 (5%) of the total were between 40 and 49 years old. With regard to marital status, 69 (28.5%) were married and 129 (53.5%) were single while the remaining 41 (17%) were 'others'. In terms of education level, 20 (8.3%) didn't attend school at all, 12 (5%) of the participants attended grades 1- 4, 31 (12.9%) grades 5-8, 87 (36.1%) grades 9-12, 26 (10.8%) had certificate, and the remaining 64 (26.6%) had diploma and above. The income level of the participants shows that 87(37.5%) were low income, 83 (28.6%) were middle income whereas 69 (28.6%) were from high income category. In terms of occupational level, 37 (15.4%) were employed, 65 (27%) were self-employed, 28 (11.6) were house-wives, and 109 (45.2%) were unemployed. With regard to the composition of religion, 212 (88%) were orthodox, 18 (7.5%) were Muslims and 3 (1.2) were Protestants, while the remaining 6 (2.5%) of the total reported as 'others'.

Data Collection Instruments

Safe Sex Behaviour: Information on safe sex behaviour (condom use) was obtained from a question on whether or not the respondents used condom in the last sexual engagement during the 12 months period before the time they were asked to respond. Further, the extent to which the respondents used protective sex practice was measured through structured questionnaire (how often the respondents used condom) on a scale ranging from one to three, *1(sometimes), 2(frequently), and 3 (always).*

Sources of Knowledge about HIV/AIDS: Knowledge about HIV/AIDS and where to get condoms, if wanted, were assessed with lists of potential sources. Respondents were asked to put the lists of sources in rank order (the first rank constitutes the prime source of knowledge and the last rank constitutes the least source of

knowledge about HIV/AIDS), but for some respondents it gave the chance to list additional information about the specified issue.

Perceived Barriers of Condom Use: As there are no previously validated instruments for assessing the perceived barriers of safe sex behaviour, the components used to measure women's perceived barriers of condom use were developed by the present researcher. Since one of the major objectives of the research project is to identify the perceived barriers of women to access safe sex practice, the researcher first elicited pool of items from the target population and developed these pools of items in to a structured questionnaire so that respondents rated the items with a five point Likert scale ranging from *1(strongly disagree) to 5 (strongly agree).*There was a moderate reliability with Cronbach Alpha, α = 0.79.

Decision Making Index: The perceived capability of women to successfully negotiate condom use with a husband or partner were structured in a Likert scale, and the respondents were asked to rate each item with a five point scale ranging from *1(strongly disagree), 2(disagree), 3(neutral), 4(agree), to 5(strongly agree),* with a reliability of Cronbach Alpha, α = 0.76.

Psychosocial Attributes of Safe Sex Behaviour: These attributes were measured on four dimensions. *The perceived susceptibility:* This was measured on two items that reflect the probability that sometime soon you had sexual intercourse with someone just once without using any protection. The probability was indexed with five point Likert scale when *1(I am sure this would not happen), 2 (this probably would not happen), 3 (there is about a 50-50 chance this would happen), 4 (this would probably happen), and 5 (I am sure this would happen)*. Its reliability was reported as Cronbach Alpha, α = 0.70. *The perceived severity*: This was measured on items that reflect whether the problem in your locality is severe or not with four point scale *when 1(not a problem at all), 2 (somewhat a problem), 3 (it is a problem), and 4 (it is a very serious problem)*. Its reliability was Cronbach Alpha, α = 0.72. *The perceived benefits of condom use*: Items that reflect the perceived benefits of safer sex were included. Items included, for example, condom is useful to prevent HIV/AIDS infection. Respondents were asked to rate those items with *1(strongly disagree), 2(disagree), 3(neutral), 4(agree), and*

5(strongly agree). Its reliability was reported as Cronbach Alpha, α = 0.75. *The perceived self-efficacy of condom use*: In this dimension respondents were asked to rate the items with five points Likert Scale ranging from *1(strongly disagree), 2(disagree), 3(neutral/undecided), 4(agree), to 5(strongly agree).* Items included, for example, I am capable of successfully using condoms now and in the future; I am incapable of successfully evaluating condom use when necessary. Its reliability was Cronbach Alpha, α = 0.73. The negative items in each sub-scales were re-coded so that positive scores would imply higher concern about safer sex practice, i.e. the higher the scores on each item would imply the higher agreement on the perceived problem or condom use. Interviews and focus group discussions were also used to supplement and strengthen the quantitative data. Semi-structured interview guideline was used.

Data Analysis

The data sets were analyzed and interpreted through various statistics. Factor Analysis (FA) was used to examine the perceived barriers of condom use attributes for safe sex practice among women. Mean scores, standard deviations and paired t-tests were employed to examine the relative potential causes/perceived factors of safe sex behaviour. Univariate Analysis of Variance (UNIANOVA) was employed to see the main and interaction effects of demographic variables to the explanation of safe sex behaviour. Linear regression was used to examine the relationships among psychosocial attributes (perceived susceptibility, perceived severity, perceived benefits and self-efficacy) and the protective effects of condom use. Qualitative data (the data sets from interview and FGD) were also analysed through thematic analysis.

Results and Discussions

Knowledge about Condom Use

While different studies conducted in different settings report varying results, which could be attributed to the variation in socio-cultural and socio-economic conditions, the present research indicates that mass media 120 (49.8%), particularly imparting HIV/AIDS education

through television spots, reality shows and drama, and radio, constitutes a major source of information about condom use. The study has also shown that the majority of women have received knowledge from their teachers and peers 52 (21.6%), especially older friends they have in the social/interpersonal interaction. Table 1 shows the percentage share of each source of knowledge about condom use for protective sex practice among women in their locality.

Table 1: Sources of Knowledge about Condom Use

Source of Knowledge	Frequency	Percent
Mass Media	120	49.8
Teachers, family members, peers, friends	52	21.6
Text Books, newspaper, magazines, leaflets	28	11.6
HIV/AIDS programs and training	39	16.2
Total	239	99.2
Missing System	1	0.8
Total	240	100

Source: Own Survey, 2013

The present result indicates that the awareness level about HIV/AIDS among sexually active women has been attributed to different sources of knowledge. The result shows evidence that there exists a significant gap in having a proper knowledge about condom use. This might be possibly the sexual attitude in Ethiopia is ambivalent (neither permissive nor strict) obstructing the knowledge about condom use. Another may be the presence of certain misconceptions that restrict having multiple sources of knowledge about condom use. Moreover, as can be seen from the above table, the most promising source of knowledge about condom use such as training and reading materials (text books, news paper, magazines, and leaflets) were found to be the least important source of knowledge about condom use. This would suggest the need to do a lot in providing basic knowledge about HIV/AIDS through mass educational events.

Since women are more often adversely affected by HIV/AIDS than men for different reasons, sources of knowledge about condom should be the locus of attention for any intervention to take place. Therefore, the key to HIV/AIDS control among women should address health education and behavioural change communication. Ensuring safe sex practice through training on HIV transmission, condom utilization and dissemination of reading materials closely related to basic sources of knowledge of condom use would also be tailored. However, use of condom is not enough by itself unless effective use of condom will be in effect. Thus, the author of this paper forwards further research on consistent and effective use of condom among female population.

The qualitative analysis from interview was centred on the sources of condom use to the question "Where did you hear about condom use?" The interviewees identified multiple sources of information that fell into the following categories: television/radio, friends/family/neighbours, newspapers/magazines, posters/public campaigns, health clinics/ health workers, spouse/partner or a combination of these sources. This implies that sexually active women are making efforts to protect themselves against the risk of HIV through condom use. The source from which participants learned about AIDS is also significantly implying condom use. In the discussion, the author further understood that those women who had heard of condom use through word of mouth only (i.e., friends, family or neighbours) had lower perception of using condoms. These sources might not emphasize taking precautionary measures to prevent transmission of HIV. In addition, these social networks may emphasize procreation, thus discouraging use of condoms. This suggests that programs that aim at promoting condom use should include condom use demonstrations as a way of promoting correct use in fighting against the deadly virus.

Perceived Barriers of Safe Sex Behaviour (Condom Use)

More alarming is the perceived barriers of condom usage reported by sexually active women. To select the best perceived barriers of condom use, principal axis factoring/principal component analysis with an Eigen cut off value 0.1 and Varimax rotation was used. The

factor analysis reduced the nineteen items measuring the perceived factors of safe sex practice into two principal components, accounting for 33.47 percent of the overall variance. The first component accounted for 19.6 percent of the variance, and the second component accounted for 13.87 percent. Given N = 200 (fair in terms of sample representativeness) factor loadings of greater than 0.4 met Bordens' and Abbott's (1988) statistically significant criterion. Therefore, in this study items having factor loadings of 0.41 and above are statistically significant. A list of items and factor loadings for each factor along with variance explained are presented in Table 2.

The first component, labelled 'personal attributes', consisted of eleven items, all dealing with the perception and experiences of the individual by forces operating due to psychic deficiencies. The second component, 'sociocultural attributes,' was composed of five items related primarily to the cultural values mainly operating by dynamic contextual forces. The quantitative data were also supplemented by qualitative data. The open ended questionnaire also revealed that most notably, talking and buying condom are embarrassing, personal values associated with using condom and sex-related issues constitute a taboo for discussion comprise the most significant barriers to safe sex behaviour of women in their locality. It was also observed that sexual relationships tended to be secretive with limited condom usage.

Table 2: Factor Analysis of Perceived Barriers of Safe Sex Behaviour

Perceived Barriers of Condom Use	Component	
	1	2
Talking about condoms is embarrassing	-.026	.839*
Buying condoms is embarrassing	.010	.860*
The lack of privacy in stores (condom sales shops)	.122	.584*
The social stigma associated with condom use	.367	.437*
Sex-related issues constitute a taboo for discussion	.191	.619*
Women are hindered from actively seeking counselling regarding sexual behaviour	.412*	.163
Widespread ignorance about the disease (deadly virus)	.591*	.217
Lack of formal education related to sexual behaviour	.447*	.020
Prevalence of poverty (low socioeconomic status) in my locality	.447*	.131
Limited involvement in community activities related to HIV/AIDS programs	.562*	.038
Heavy domestic work load prevents me from getting information about HIV/AIDS	.596*	-.080
Mobility requires permission from males	.205	.188
Religious practices (beliefs) associated with condom use	.365	.033
Inequality in natural laws between male and female	.496*	.126
Previous negative experiences related to sexual behaviour	.592*	.181
Personal values associated with using condom	.602*	.228
Legislation of country doesn't give privilege to women	.372	-.084
Lack of commitment among partners	.557*	.168
Communication problems related to safe sex practice among the partner	.557*	.263
Total Variance Explained (33.47%)	**19.6%**	**13.8%**

Loading Factors > 0.40; Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization*

Source: Own Survey, 2013

To assess the relative importance of each perceived barriers, the researcher computed scale scores for each component (by summing up the item scores for each scale and dividing by the total number of items in the factor), and compared the mean scores for each component using paired t-tests. Mean scores, standard deviations and paired t-tests for the two main factors

derived from the perceived barriers of protective condom use measures are reported in Table 3.

The higher the mean score the higher the agreement that the component is a barrier for safe sex behaviour. The result shows the respondents perceived the personal attributes of barriers of protective condom use more than the sociocultural attributes. The findings of the present research support the theory of planned behaviour (Ajzen and Fishbein, 2004) which argues that, to understand behaviour, we need to know what a person's beliefs are about a particular behaviour (e.g. condom use). Such beliefs affect the attitude towards the behaviour and the intention to perform the behaviour. However, the mean score of sociocultural components of perceived barriers of condom use is still higher than the midpoint score where minimum mean score is 1 and maximum mean score is 5. This takes up the author for the consideration of sociocultural elements as important determinants of condom use. In this regard, in the formation of intentions, the behaviour of important others are also taken into account inspired by the notion of self-efficacy from social cognitive theory (Bandura, 1997).

Table 3: Means, SD and Paired t-tests for the Components of the Perceived Barriers of Condom Use, N = 240

Perceived Barriers of Condom Use	Mean	SD	Mean Difference	Std. Error Mean	df	t
Personal Components	3.31	.757	0.149	.0639	239	2.342*
Socio-cultural Components	3.16	1.02				

P < 0.05*

Source: Own Survey, 2013

The present research reported some more important possible perceived barriers in practicing safe sex behaviour mainly relies on personal values associated with condom use, widespread ignorance about the deadly virus, lack of commitment about protective condom use, communication problem among partners and limited involvement in sex related education among women which are tending to affect the perceptual processes in adapting their environment. For instance, the result reveals more on the trickles effect as reflected on the respondents observed to have a perceptual effect from using safe sex behaviour. The result shows that condom use behaviour is affected more by the respondents' personal values. Arguably, the result also shows, on balance, that sexual behaviour, i.e. condom use is influenced by social structures (taboo, social stigma, embarrassing) and processes (e.g., cultural values, beliefs) that are functional more in shaping behaviour in countries like Ethiopia. Therefore, it becomes important to report sociocultural factors in the discussion of safer sex behaviour in our context.

In a conservative society where sex related issues constitute a taboo for discussion, women (who are the most important segments of the population) are hindered from actively seeking counselling regarding sexual behaviour. Social ostracism/exclusion and condom use related stigma have created an attitude of negativity and shame in the minds (mental constructs) of women who are sexually active. This results in lack of knowledge about self-protection measures, leading to a silent spread of the disease in the target segment of society.

What is more, in such local community, condom use related stigma tends to be highly linked in people's minds to sexual behaviour which again is regarded as promiscuous behaviour. This attitude puts women into unnecessary hostile and embarrassing situation, they face discrimination and neglect. Worse still, stigma leads to secrecy and denial that tends to hinder openness about the HIV and prevents women from seeking counselling and testing for HIV. Despite several disease-related misconceptions have been cleared by respective stakeholders, widespread ignorance about the deadly virus is still prevalent among women belonging to the affluent sections of society that calls urgent attention from governmental and nongovernmental

organizations. Therefore, in fighting the epidemic, every effort shall be put into breaking the long deadly silence about the perceived perceptual and sociocultural factors simultaneously on HIV/AIDS by all sectors at all levels. Given the predictive value of social influence on behaviour, promoting an environment in which safe sex is the norm appears to be a powerful means to reduce risky sexual behaviours among women who are productive forces of the society.

The analysis from the focus group discussion generally resulted in two categories of perceived barriers: personal and socio-environmental barriers to condom use among women. Personal barriers, feelings and perception of inability and incompetence in protective use of condom, are a result of some underlying factors namely low self-esteem, lack of behavioural skills and lack of self-efficacy in condom use. Participants with low self-esteem have less sexual protective behaviours. In such circumstances, a woman is deprived of her right to choose and therefore considers herself to be worthless. Low self-esteem is completely evident in the context of marital sexual intercourse. Low self-efficacy and lack of behavioural skills were also reflected in the form of lack of communication skills in coming to an agreement making a compromise regarding condom use and the lack of self-efficacy in using condom. Not being able to imagine themselves as using condoms in addition to some psychological characteristics (for example, low self-esteem), women are all influenced and forced by the power of men's decisions and financial needs. One of the Focus Group Discussion participants loudly spoke: *"I don't want to have a sexual relationship without condom. There is nothing I can do, even if I cry, nothing changes. He does whatever he wants-whether I like it or not."* In this study, lack of communication skills such as inability to say 'no' and the lack of negotiation skills regarding its use were highlighted as the main obstacles to condom use. Perceived lack of control in condom use in addition to lack of self-esteem were also mentioned as the other main barriers for having sexually protective behaviour, in the sense that sexual relations constitute a special mutual relationship and the importance of good communication between couples has been emphasized.

Underlying factors contributing to the formation of sociocultural theme (socio-environmental barrier) are concepts such as an unsupportive environment and cultural norms. According to the participants' point of view, the lack of protective skills against HIV and the use of condom, stems from the lack of education and lack of awareness of women. With regard to cultural norms, the locus of discussion mainly shifted to gender norms. Most participants in the discussion pointed out that men's freedom in a relationship, double standards, patriarchy and the male's overpowering strength in a relationship, dependency of the partner in condom use, insecurity in marital relationships and the need of financial support, have been shown to have serious effects regarding the use of condom for women, to a larger extent. Further, one of the participants said: *"In our own culture, men are more powerful. It is he who suggested sex and that I should agree and say yes! Women are more submissive; we are embarrassed that is why we are afraid of using condom"*. Participants that had more conservative traditional attitudes toward gender roles had even more perceived barriers of condom use. Such an attitude has a negative effect on women's self-efficacy in protecting themselves from risky sexual conditions. Associations between gender norms, risk of HIV and one's ability to use condom are issues often documented in literature (Lofti *et al.*, 2012). In the present study, gender norms and traditional concepts of sexual relationship weaken women's negotiation skills. Furthermore, financial and emotional dependencies, along with cultural obstacles, limit their ability to have safe sex. Women empowerment strategies along with financial and emotional support need to be considered in programs promoting condom usage (Greig & Koopman, 2003; Choi & Holroyd, 2007).

UNI-ANOVA Results of Demographic Attributes of Safe Sexual Behaviour (Condom Use)

The researcher carried out univariate analysis of variance (UNI-ANOVA) to determine the degree to which demographic variables had effects on protective safe sex practice of women. The statistical analyses are given in Tables 4 and 5. In the first univariate analysis, age, marital status, education level and occupation were entered simultaneously to avoid the collinearity effects of the variables. For

the same reason, in the second univariate analysis of variance, expenditure, family size, income level and religion were also entered concurrently.

Except the marital status that had statistically significant main effect on condom use behaviour of women ($F(4,153) = 3.386$, $P < 0.05$), none of the contextual factors was statistically associated with condom use in univariate analysis, at confidence level of 95% (Please see Tables 4 and 5 for further information). Mean scores and standard deviations among the groups were computed; those women who have got married (Mean = 1.496, SD = 0.517) are more exposed to risky sexual behaviour than their single counterparts (Mean = 1.676, SD = 0.471). However, statistically significant interaction effects were found between age and marital status ($F(4,153) = 2.349$, $P < 0.05$), educational level and occupation ($F(13,153) = 2.559$, $P < 0.05$). Other important interaction effects were also observed among expenditure, family size, income level and religion.

Table 4: UNI-ANOVA Tests of Significance for Main and Interaction Effects of Age, Marital Status, Education Level and Occupation on Condom Use

Source	SS	df	MS	F	Sig.
Corrected Model	29.609[a]	84	.352	1.594	.006
Intercept	78.616	1	78.616	355.616	.000
Age	.930	2	.465	2.103	.126
Marital Status	2.994	4	.749	3.386	.011*
Educational Level	.806	5	.161	.729	.603
Occupation	.410	3	.137	.619	.604
Age * Marital Status	2.077	4	.519	2.349	.050*
Educational Level * Occupation	7.354	13	.566	2.559	.003*
Error	33.824	153	.221		

Total	611.000	238
Corrected Total	63.433	237

a. R Squared = .467 (Adjusted R Squared = .174)

Source: Own Survey, 2013

Table 5: UNI-ANOVA Tests of Significance for Main and Interaction Effects of Expenditure, Family Size and Religion on Condom Use

Source	SS	df	MS	F	Sig.
Corrected Model	16.911[a]	52	.325	1.292	.111
Intercept	51.296	1	51.296	203.799	.000
Expenditure	.521	3	.174	.689	.560
Family Size	.830	3	.277	1.099	.351
Income Level	1.872	4	.468	1.860	.119
Religion	.271	3	.090	.359	.783
Expenditure * Family Size	3.897	4	.974	3.871	.005*
Expenditure * Family Size * Income	3.888	8	.486	1.931	.050*
Expenditure * Family Size * Religion	2.408	2	1.204	4.784	.009*
Expenditure * Income * Religion	2.614	2	1.307	5.193	.006*
Error	46.313	184	.252		
Total	604.000	237			
Corrected Total	63.224	236			

a. R Squared = .267 (Adjusted R Squared = .060)

Source: Own Survey, 2013

In the univariate analysis, marital status had main effects on protective condom use. Those who are married were less likely to use condom than those who are single. The author might possibly attribute the relationship between married women and unprotected safe sex to the fact that daily life of women is embedded with the wider cultural understandings. This might also go to the explanation that sexual relationships tend to be secretive with limited condom usage. Their rights, obligations and the sanctions applied to them, including those regarding their sexual behaviour, are leading them to have unsafe sex behaviour.

Overall, the belief in male supremacy underpins most customary laws in our society and it is the ideological basis for male domination in both domestic and public life. This may be driven by extra secretive sex with limited condom use. Besides, many customary laws in our system are not conducive to gender equality in decision making and put women in a vulnerable position, in particular when they are married. It is important that we continue in our efforts to create an environment in which sexually active adult women use condom as the most effective method of preventing HIV infection.

What are interesting in this study are the interaction effects of contextual variables on protective condom use (See Tables 4 and 5). In the present study, the holistic approach of safe sex behaviour of women seems to be more helpful than the parts of the socio-demographic attributes have on protective safe sex practice. In support of this, in his field theory, Lewin (1951) asserted field as the totality of coexisting facts which are conceived as mutually interdependent. Individuals are seen to behave differently accordingly to the way in which tensions between perceptions of the self and of the environment are worked through. The whole psychological field within which people acted has to be viewed, in order to understand behaviour (condom use). Therefore, practitioners, policy makers and other stakeholders should focus on coupled factors on preventing HIV infection and condom use attributes rather than focusing on single factor or analysis of units.

Linear Regression Results of Psychosocial Attributes of Safe Sex Behaviour

The researcher further investigated the relationships of psychosocial attributes (the construct of perceived susceptibility, perceived severity, perceived benefits and perceived self-efficacy) and the protective sex practice of women. Statistically significant correlates of psychological constructs of safe sex behaviour are presented in Table 6.

In this study I examined perceptual factors (or psychosocial attributes) that may be associated with condom use or the relationship between condom use and perceived constructs of sexually active women. The result shows that decision making index, perceived severity and perceived benefits are correlated with condom use. More specifically, 59 % variance accounted for condom use was explained by decision making index; 14.5 % of variance explained by perceived severity and 13.7% of variance explained by perceived benefits of condom use in that order. The results are consistent with the findings reported by Adih and Alexander (1999) and Meekers and Klein (2002) that there exists an association between high levels of condom use and perceived ability to negotiate and use condom. In a study conducted in urban Cameroon and rural Ghana, they also found a strong positive association between perception of personal risk of HIV and a high level of condom use.

Table 6: Linear Regression Tests of Psychosocial Attributes of Safe Sex Behaviour

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.031	.174		17.440	.000
Decision Making Index on condom use	.064	.005	.591	-12.611*	.000
Perceived Susceptibility to HIV/AIDS	.024	.015	.077	-1.623	.106
Perceived Severity of HIV/AIDS	.042	.014	.145	-2.944*	.004
Perceived Benefits of Condom Use	.013	.006	.133	-2.214*	.028

Perceived Self-Efficacy of Condom Use	-.005	.004	-.083	-1.440	.151
Perceived Barriers of Condom Use	.000	.002	-.006	-.121	.904

a. Dependent Variable: Condom Use
Source: Own Survey, 2013

The regression analysis shows that among the five psychosocial attributes, decision making index, perceived severity and perceived benefits of condom use are associated with safe sex behaviour of women. However, perceived susceptibility and perceived self-efficacy are found to be statistically uncorrelated with condom use. The absence of relationships between condom use and perceived susceptibility to HIV/AIDS in the present study is contrary to previous studies from sub-Saharan Africa (Adih and Alexander, 1999; Akwara *et al.*, 2003; Maswanya *et al.*, 1999; Meekers and Klein, 2002).

The Health Belief Model proposes that an individual will take preventive action if he or she regards him or herself as susceptible to a condition such as HIV/AIDS, and if he/she believes that a course of action available to him/her (i.e. condom use) would be beneficial in reducing his or her susceptibility. Rosentock (1990) also shows that an individual will take preventive action if he/ she believes the anticipated barriers to take the action are outweighed by the benefits. Although the respondents' perceived susceptibility (the probability whether sometime soon you had sexual intercourse with someone just once without using any protection) did not predict the protective use of condom among women, the author found that there is a strong association between personal perception of severity of HIV risk and safe sexual behaviour. The more a woman believed that HIV/AIDS is a serious problem in her locality, and that AIDS could affect her health, the more likely she is to believe that she should practice safe sex behaviour.

Decision making index about condom use had also reported to be associated with increased condom use. The more the woman successfully negotiated with her partner, the more likely she would use safe sex practice. However, perceived self efficacy and safe sex practice of women was not statistically correlated. Further research needs to investigate different contexts in which self-efficacy may

influence behaviour. For example, based on the current data, the following types of research question will be explored. Does the role of self-efficacy change depending on the situation if the sexual encounter is perceived to be risky or if the person regards him/her self susceptible to HIV risks, does self-efficacy then impact a person's behaviour? Finally, the researcher found such mixed results that provide insights for future research and implications.

Conclusions

The findings of the present study indicate that the key source of knowledge about condom use was captured through mass media (incorporating HIV education through TV, radio), while the least source was found to be HIV/AIDS programs and trainings, and reading materials in that order. The result also shows that the respondents perceived the personal attributes of barriers of protective condom use more than the sociocultural attributes. The result provides some insight on how decision making index, perceived severity and perceived benefits predicted protective sex behaviour (condom use) of sexually active women. Finally, the researcher concludes, the results show that psychosocial attributes of safe sex behaviour (perceived severity, perceived susceptibility, perceived benefits and perceived self-efficacy) and demographic variables interact with one another to influence condom use among women population.

Recommendations

The findings suggest that there are different sources of knowledge about condom use in that government and nongovernmental organizations should increase women's awareness level on HIV transmission and condom utilization through various channels that would bring desired change in sexual behaviour. Respondents perceived the personal barriers of condom use more than the sociocultural attributes. To this effect, women peer educators should be trained so that they will enable other sexually active age groups to make an informed decision regarding unprotected sex and promoting oneself for positive image of condom use with enhancing zero tolerance for social stigma associated with it.

The results of the study also provided an insight on the way respondents' safe sex behaviour is affected by contextual (demographic and socioeconomic variables) and psychosocial variables, with recommendations for developing individual and/or community based appropriate interventions accordingly. Most notably, ensuring the sources of knowledge about condom use should be given adequate attention at all levels, and holistic health promotion programmes focusing on working women at risk of HIV infection (e.g. unsafe sex practices, substance abuse and violence) should be tailored.

Acknowledgements

It is a pleasure for me to acknowledge the financial contributions of Mekelle University for the undertaking of this research. Most important acknowledgement and message of appreciation go to the College of Social Sciences and Languages. The completion of this research undertaking was facilitated greatly by UICL-CRPT (University-Industry Community Linkage Office, Contract Research and Publication Team) exceptional research leadership. I have never experienced the level of support, continued guidance and effort presented by the UICL-CRPT and College Council toward the realization of this research. I also wish to thank Mr. Yohannes Fisseha of the Department of Psychology for his tireless questionnaire translation and data collection to make this research work possible.

References

Adih, W.K. and Alexander, C.S. 1999. Determinants of Condom Use to Prevent HIV Infection Among Youth in Ghana. Journal of Adolescent Health, 24, 63–72.

Airhihenbuwa, C. 1995. Health and Culture: Beyond the Western Paradigm. Thousand Oaks, CA: Sag Publications.

Ajzen, I. 1991. The theory of planned behaviour. Organizational Behaviour and Human Decision Processes, 50(1), 79-211.

Ajzen, I. and Fishbein, M. 2004. Questions raised by a reasoned action approach: reply to Ogden. Journal of Health Psychology, 10, 27-31.

Albarracin, D., Johnson, B.T., Fishbein, M. and Muellerleile, P.A. 2001. Theories of reasoned action and planned behaviour as models of condom use: A Meta analysis. Psychological Bulletin, 127(1), 42-161.

Alemu B. 2001. Social Stigma of HIV/AIDS in Addis Ababa, Ethiopia: A Gender Perspective. M.Sc. thesis (unpublished), University of London.

Amouzou, A. 2003. Levels and Cross-Country Determinants of Condom Use in Sub-Saharan Africa. Paper presented to the Fourth African Population Conference: Population and Poverty in Africa: Facing the 21st Century Challenges.

Bandura, A. 1997. Self-efficacy: The exercise of control. New York: W.H. Freeman.

Bertrand, J.T. and Escudero, G. 2002. Compendium of indicators for evaluating reproductive health programs. Measure Evaluation Manual Series, No. 6., Carolina Population Centre, University of North Carolina, Chapel Hill, USA.

Beyene Petros, Solomon Belayneh and Yared Mekonnen. 1997. AIDS and College students in Addis Ababa: A study of Knowledge, Attitude and Behaviour. Ethiopian Journal of Health development, 2, 115-123.

Blanc, A.K. 2001. The Effect of Power in Sexual Relationships on Reproductive and Sexual Health: An Examination of the Evidence. Discussion paper for the Population Council discussion meeting on 'Power in Sexual Relationships', Washington D.C., 1–2 March.

Bruijn, B.J. 1999. Foundations of demographic theory: Choice, process, context. Amsterdam.

Chaze, K. 2000. A study to determine how cultural practices and beliefs influence the spread of HIV/AIDS in Lusaka (Unpublished). University of Zambia.

Choi, S.Y.P., Holroyd, E. 2007. The influence of power, poverty and agency in the negotiation of condom use for female sex workers in mainland China. An International Journal for Res, Intervention and Care, 9(5), 489–503.

Chuulo, M.B. 2001. Traditions, culture and customary law relating to rights of woman and children in Zambia. Woman and Law in Southern Africa (WLSA).

Cohen, D. 2000. Poverty and HIV/AIDS in Sub Saharan Africa, SEPED Conference Paper Series, UNDP. http://www.undp.org/poverty/publications/conf_pub.htm.

Conner, M., and Armitage, J.C. 1998. Extending the theory of planned behaviour: A review and avenues for further research. Journal of Applied Social Psychology, 28:1429-1464.

Denison, J. 2003. Behaviour Change: A summary of four major theories. Family Health International/AIDSCAP, Arlington, USA.

Dworkin, S.L., Kambou, S.D., Sutherland, C., Moalla, K., Kapoor. A. 2009. Gendered empowerment and HIV prevention: Policy and programmatic pathways to success in the MENA region. J Acquir Immune Defic Syndr, 51(3), 111–118.

Esser, H. 1993. The rationality of everyday behaviour. Rationality and Society, 5(1), 7-31.

Fishbein M. 2000. The role of theory in HIV prevention, In: AIDS Care. 4th International Conference on the Bio-psychosocial Aspects of HIV Infection, 15-18 July, Ottawa, Canada, 12, 273-278.

Greig, F.E., Koopman, C. 2003. Multilevel analysis of women's empowerment and HIV prevention: Quantitative survey results from a preliminary study in Botswana. AIDS Behaviour, 7(2):195–208.

Kishor, S. 1999. A Framework for Understanding the Role of Gender and Women's Status in Health and Population Outcomes. Macro International, Calver.

Kloos, H. and Damen Haile 2000. HIV/AIDS in Ethiopia: An Overview. Northeast African Studies, 7(1), 13-40. DOI: 10.1353/nas.2004.0006.

Kloos, H. Damen Haile, and Lindtjorn, B. 2007. The AIDS Epidemic in a Low-Income Country: Ethiopia. Human Ecology Review, 14(1), 39-55.

Lagarde, E., Carael, M., Glynn, J.R., Kanhonou, L., Abega, S.C., and Kahindo, M. 2001. Educational level is associated with condom use within non-spousal partnerships in four cities of Sub-Saharan Africa. AIDS, 5, 1399-1408.

Lotfi, R., Tehrani, F.R., Yaghmaei, F., & Hajizadeh, E. 2012. Barriers to condom use among women at risk of HIV/AIDS: A qualitative study from Iran. BMC Women's Health, 12(13), 1-10.

Macmillan, J. 2002. HIV/AIDS and the law: Challenges for women's sexual and reproductive rights. Paper presented at the FAO/SARPN workshop on HIV/AIDS. WLSA Research and Educational Trust Zambia.

Maharaj, P., & Cleland, J. 2004. Condom use within marital and cohabiting partnerships in KwaZulu-Natal, South Africa. Studies in Family Planning, 35(2), 116-124.

Meekers, D., & Klein, M. 2002. Determinants of condom use among unmarried youth in urban Cameroon. Studies in Family Planning, 33(4), 335-346.

Ministry of Health. 2002. National Guidelines for voluntary HIV counselling testing in Ethiopia. Addis Ababa: MHO Disease Prevention and Control department.

_____. 2008. Health and Health related indicators. Addis Ababa, Ethiopia.

Morrill, A.C., Ickovics, J.R., Golubchikov, V.C., Beren, S. E., and Rodin, J. 1996. Safer Sex: Social and Psychological Predictors of behavioural Maintenance and change among heterosexual women. Journal of Counselling and Clinical Psychology, 64(4), 819-827.

Murray, C.J.L., and Lopez, A.D. 1998. The Global Burden of Sexually Transmitted Diseases, HIV, Maternal Conditions, Prenatal Disorders, and Congenital Abnormalities. Global Burden of Disease Series, Vol. 3, Boston, Massachusetts: Harvard University Press.

Rosenstock, I., Strecher, V., and Becker, M.1994. The Health Belief Model and HIV risk behaviour change, in: DiClemente R.J. and Peterson J.L. (eds), Preventing AIDS: Theories and methods of behavioural interventions, Plenum Press, New York, 5-24.

Sheeran, P., Abraham, C., Orbell, S. 1999. Psychosocial correlates of heterosexual condom use: a Meta analysis. Psychological Bulletin, 125, 90-132.

Sinding, S.W. 2005. Does 'CNN' (condoms, Needles and Negotiation) work better than 'ABC' (Abstinence, Being Faithful and Condom Use) in attacking the AIDS Epidemic? International Family Planning Perspectives, 31(3), 38-40.

Stanecki, K. 2002. The AIDS pandemic in the 21st century. US Bureau of the Census.

Sutton, S. 1998. Predicting and explaining intentions and behaviour: how well are we doing? Journal of Applied Social Psychology, 28, 1317-1338.

UNAIDS. 2001. Africa: gender discrimination and HIV/AIDS, United Nations Office for the Co-ordination of Humanitarian Affairs, In: AIDS Today.

_____. 2000. Gender is Crucial Issue in fight against Aids. Press release, 5 June.

_____. 2003. Aids epidemic update, UNAIDS, Geneva.

_____. 2004. AIDS epidemic in Sub-Saharan Africa, UNAIDS, Geneva. www.unaids.org

UNFPA. 2001. The State of World Population 2000: lives together, worlds apart: men and women in a time of change, New York.

Vass, J. 2003. Globalization and the impact of HIV/AIDS on the Labour Force, Discussion paper, Employment and Economic Policy Research, Pretoria.

Wach, H., and Reeves, H. 2000. Gender and Development: Facts and Figures, Report No.56, Institute of Development Studies, University of Sussex, U.K.

WHO/UNAIDS. 2004. Summary Country profit for HIV/AIDS Treatment Scale.

Yadeta Dessie, Mulusew Gerbaba, Abdo Bedru and Davey, G. 2011. Risky sexual practices and related factors among ART attendees in Addis Ababa Public Hospitals, Ethiopia: A cross-sectional study. BMC Public Health, 11(422), 1-10.