

Communication Factors that Influence High School Students in their Response to being Faithfulness Message for HIV/AIDS Prevention in Hossana Town, Ethiopia: A Cross Sectional Study

Feleke Doyore*

Department of Public Health, Faculty of Medicine and Health Science, Wachemo University, Hossana, Ethiopia

*Corresponding author: Feleke Doyore, Lecturer and Researcher, Department of Public Health, Faculty of Medicine and Health Science, Wachemo University, PO Box 667, Hossana, Ethiopia, Tel: +251916291489; E mail: feledoag@yahoo.com

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Abstract

Background: Despite the massive resources and intensified interventions, desired decline in HIV/AIDS epidemics has not been achieved. This study was aimed to evaluate how students are reacting being faithfulness message for HIV/AIDS prevention using Extended Parallel Process Model (EPPM).

Method: Cross sectional study was conducted using quantitative and qualitative methods of data collection. Structured self-administered questionnaires were used to collect data. Simple random sampling was used to select respondents. Quantitative data were analyzed using SPSS version 16.0. Qualitative data were analyzed using OpenCode software.

Results: 61.5% (251/408) of the respondents were in danger control response whereas 38.5% (157/408) of the respondents were in fear control response. As independent predictors, self efficacy [AOR (95%CI)=0.32 (0.37 to 0.72)], response efficacy [AOR (95%CI)=0.82 (0.59 to 0.98)] of HIV/AIDS, religion (catholic) [AOR (95%CI)=0.33 (0.65 to 0.69)] and age (20-24) [AOR (95%CI)=0.13 (0.43 to 0.73)] were positively associated with danger control response where as fathers' occupation [AOR (95%CI)=3.31 (5.55 to 19.08)], perceived susceptibility to [AOR (95%CI)=4.42 (2.44 to 8.61)], perceived severity of [AOR (95%CI)=5.33 (3.21 to 14.74)] HIV/AIDS and not hearing faithfulness message [AOR (95%CI)=5.11 (6.91 to 17.08)] were negatively associated with danger control response. The EPPM Model explained 59.04% of variance in this study.

Conclusion: Despite higher numbers of students were in danger control psychological responses, intolerable numbers are in fear control responses. Therefore, due attention should be given to fill the gap of perception of risk in both self-efficacy to be fixed with one sexual partner and response efficacy to be stayed with that one sexual partner tailoring the message in the context of their religion, age and their income.

Keywords: Faithfulness message; Danger or fear control; Discriminative scores

Introduction

Global burden of HIV/AIDS remain enormous and still its epidemics continued to grow [1,2]. Various preventive strategies have been employed to curb the spread of this infection as there is presently no cure. Being faithfulness is among the prominent options repeatedly offered as intervention [2,3].

According to UNAIDS 2011, HIV/AIDS prevalence in Young people covering the age range 10-24 years is high, which account for 45% of all new HIV infections [1,2]. The overall HIV prevalence estimate for Ethiopia in 2011 was 2.3% and is in increasing in trend [1,2]. Despite the massive resources and intensified interventions,

desired decline in HIV/AIDS epidemics has not been achieved [4,5]. Theories and models help to explain the process that individuals how people exchange information and interpret and react to different messages.

In this study, Extended Parallel Process Model (EPPM) is used to explain when and why the recommended message work or fail [6]. According to the initial tenets of the EPPM, when an individual is exposed to a fear appeal, two cognitive appraisals of the message will occur: first, the "appraisal of the threat" and second, the "appraisal of the efficacy" of the message's of recommended response (as a problem (threat) and solution (efficacy information). EPPM assumes that if the perceived threat is perceived to be high and the level of efficacy appraised; individuals will be appraised to follow one of two separate pathways: the danger control process/intended response and fear control process/unintended response [1,7] (Figure 1).

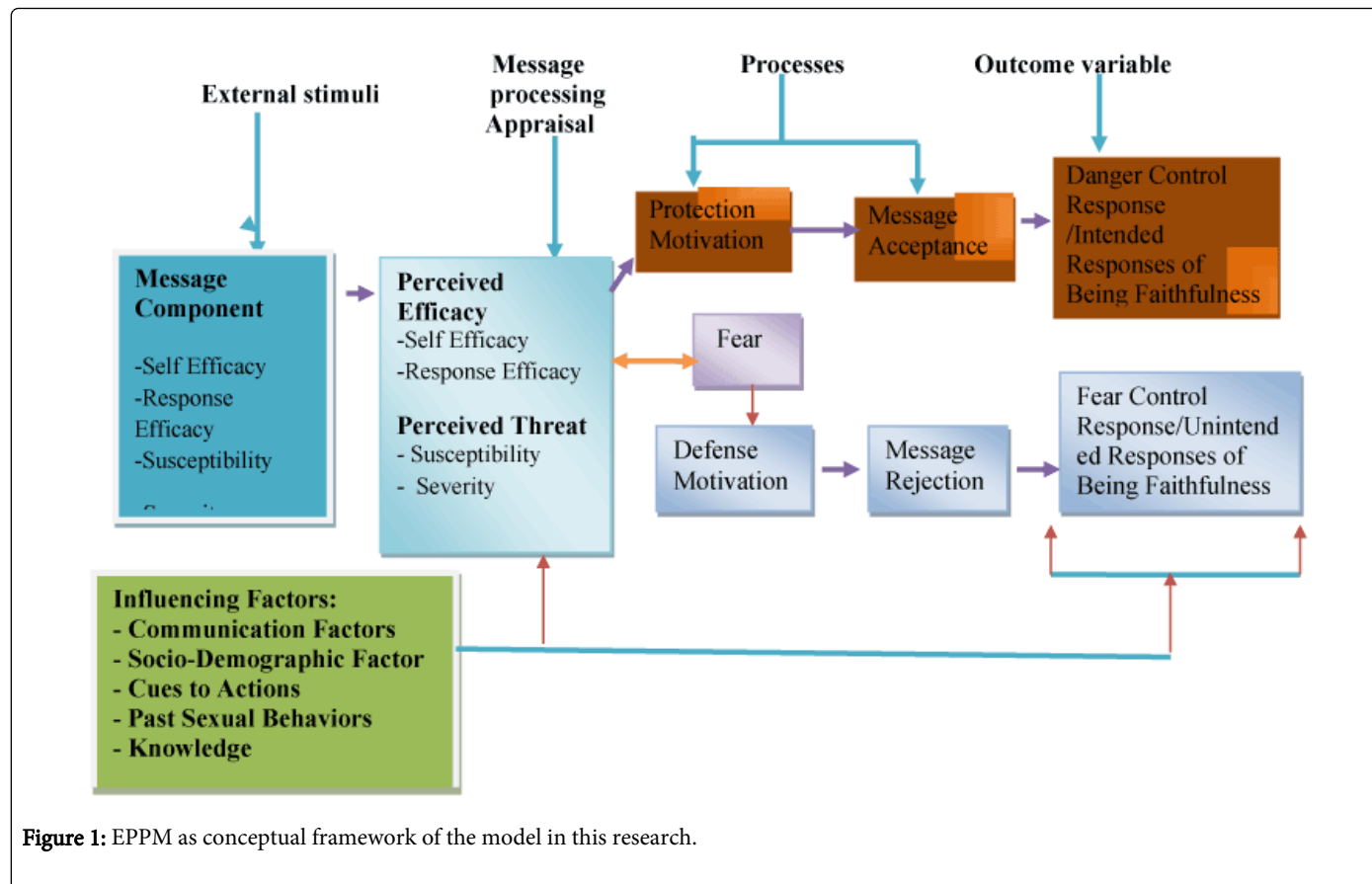


Figure 1: EPPM as conceptual framework of the model in this research.

Perceived threat from HIV/AIDS is respondent's perception of one's harm/threat from HIV/AIDS which is measured by summed perceived susceptibility and severity. Perceived efficacy of recommended response is respondent's perception of one's harm/threat from HIV/AIDS can be prevented by their ability and belief of effectiveness of the response which is measured by the sum of self-efficacy and response efficacy to be faithful. Danger control - When people believe they are at-risk for health threat that is HIV (i.e., high perceived threat), and they believe that they are able to effectively avert it from occurring (i.e., high perceived efficacy), they are motivated to control the danger or threat. Fear control - When students believe they are at-risk for a serious or significant threat (HIV/AIDS) (i.e., high perceived threat), but they believe they are unable to perform the recommended response or they believe the recommended response to be ineffective (i.e., low perceived efficacy), then they focus on controlling their fear about the threat [1,4,6,7].

The model is primarily designed for campaign message evaluation which is truly analogous with this research that aimed to evaluate the effectiveness of being faithfulness message for HIV prevention that can show the category of respondents. Therefore, the findings of this study will enable policy makers, schools, message developers, health educators, and researchers used as baseline data to design appropriate and effective intervention messages.

Methods and Materials

Study area and period

The study was conducted in Hossana high school students as of April 14 to May 14, 2013. Hosanna is located 230 km south west from Addis Ababa the capital of Ethiopia being the capital city of Hadiya zone. In the town there are three public and six private high schools, each of the students are coming from different districts of the zones. In 2013 a total of 9,558 students were registered in all the nine schools.

Regarding educational system, every child is encouraged to attend kindergarten class zeros at age of 4. This zero classes are kindergarten one, two and three. Then, at age 6-7 he/she becomes grade one student. Grade 1-4 is primary first cycle; 5-8 primary second cycle and grade 9-10 high school. In 10th grade a student must take Ethiopian general high school leaving certificate examination either to join diploma program in various fields or to join two years university preparatory classes. After two years preparatory class (commonly called grade 11-12) a student is expected to pass the final comprehensive examination to join university. The university education is almost the same as other countries. Some programmes may take three years (teaching) and some other may take four to six years (health, engineering and medicine).

Concerning preference of the school, those who can afford the payment prefer to learn in private schools where as those who can't afford (from poor families) prefer government school since in Ethiopia in government school the school fee is exempted.

Study design and populations

Cross sectional study design with quantitative and qualitative methods of data collection was used. All sampled students of nine high schools who were present during study period were included. For qualitative part, teachers and Anti-AIDS club member students were involved.

Sample size and sampling procedure

The sample size was calculated using single population proportion formula by considering 50% estimated proportion of danger control/intended response for being faithfulness message because there is no study conducted in related topic in the study area, margin of error 5%, a 5% level of significance i.e. 95% confidence interval of certainty. Based on the above assumptions, with an additional 15% contingency for non-response the total sample size was 425. Then, the enumerated list of all students prior to the study period was secured from the respective recording offices of the all schools. The number of students to be included in study was selected by simple random sampling technique from student roster of each school. Nine In-depth Interviews (IDI) were conducted with teachers and four Focus Group Discussions (FGD) with club member students (6-12 members in each group). Purposive sampling was used for IDI and FGD.

Measurement and variables

Outcome Variable: Reaction to faithful message (Danger control or Fear Control response).

Socio-demographics characteristics: age, sex, marital status, religion, previous residence, father and mothers occupation and with whom currently living of the respondents consisting of 12 items.

Knowledge questions with response format of 'yes' or 'no'. Respondents were asked not to guess, but to mark the "I don't know" answer possibility if they did not know the correct answer. Knowledgeable - those respondents who answered seventy five percent and above of all the knowledge questions about HIV/AIDS. Not Knowledgeable - those respondents who answered below seventy five percent of all the knowledge questions about HIV/AIDS [8].

Perceived susceptibility to HIV/AIDS is respondent's self perception of vulnerability to HIV/AIDS measured by summed score of related belief items on 5-point Likert scale. Perceived severity of HIV/AIDS is respondent's hold belief concerning the effects given disease seriousness or condition would have on one's state of health affairs, measured by summed score of related belief items on 5-point Likert scale. Perceived response efficacy to use recommended response is respondent's belief about the effectiveness of being faithfulness method for HIV prevention, measured by summed score of related belief items on 5-point Likert scale. Self efficacy to be faithful is respondent's self confidence to be faithful in everywhere to prevent HIV transmission measured by summed score of related belief items on 5-point Likert scale.

Danger control response/intended responses- when we say danger control, the critical value (sum of efficacy score minus sum of threat score) is positive. Fear control response/unintended responses- when we say fear control the critical value (sum of efficacy score-sum of threat score) is negative. No responses- those students' with low threat perceptions regarding a health threat are neither engaging in danger nor fear control Or it is to mean that the critical value is Zero; i.e. weighted efficacy score minus weighted threat score is neither negative

nor positive. Discriminative value/critical value- are the sum of the difference between efficacy score and threat score. Responses: when we say response it is either using the recommended preventive method or not. Negatively worded item: is an item stated in way that agreement or positive responses to in the way that believed to discourage happening of health behavior or doing of recommended response and is asked in undo direction in comparison to other items.

Communication factors are factors that include source/channel, message, and personal relevance in doing so contains eighteen items with response format of 'yes' or 'No' and nominal measurements, past risky sexual behavior with 18 items with a mix of nominal and scale measurements and past HIV/AIDS risky sexual behaviors: those students' who don't use at least one recommended response to prevent HIV infection or had at least a single exposure to unprotected sex. Cues to actions are conditions that may facilitate them to hear HIV prevention method in the respondents' surroundings with 10 items with response format of 'yes' or 'no'.

Causal Partner: those students' who perform sexual intercourse with someone accidentally got irrespective one's own marital status. Sexual Partner: kind of sex partner labeled when sex is conducted with whom sexual contact was previously experienced or more specifically meeting just for the sake of sex irrespective of one's own marital status. Multiple Sexual Partners: when someone engaged on sexual intercourse with more than one sex partner whether it is casual sex or having multiple/more than one sexual partner. Experience about recommended responses: those students ever are faithful with tested partner. Factual/logical message: the message conveyed to convince students by telling facts, information related to HIV/AIDS Prevention methods. Funny/humour message: messages which are imparted with drama, role play, entertainments and enjoyments like music and songs. Fear arousal message: messages conveyed to frighten people into action by emphasizing the seriousness of outcome like dying persons, very thin individuals, etc through posters pamphlets. One sided message: presenting only advantages of being faithful through Radio, TV, News paper, etc. Two sided message: presenting advantages and disadvantages of being faithful through Radio, TV, News paper, etc. Positive message: any message given as commands like to be faithful to have safer sex or all. Negative message: any message given by discouraging students from performing maladaptive behavior, like don't make sex with multiple guys.

For validation of the instrument factor analysis was done during which confirmation factor loading score of greater than or equal to 0.4 was accepted for construct validity after using Eigen value of greater than 1 for confirming major constructs of the model. Internal consistency of items was seen separately for each construct on which items were loaded and cronbach's alpha score of greater than or equal to 0.7 was accepted for ordinal scale items and spearman score have seen for dichotomized scale otherwise was removed. Items correlation with total correlation of scores greater than or equal to 0.3 was accepted after items internal consistency is assured otherwise were checked again and removed. For qualitative part, the qualitative data collection method was applied using in-depth interview and focus group discussion in order to supplement the result of the quantitative data.

Data collection instrument and procedure

Quantitative data were collected using structured self administered questionnaires by guidance of experienced data collectors. Supervisors and data collectors were health professionals who took two days

training. The staffs were involved for facilitation purpose only. The questionnaire was adapted from literature in English to increase the comparability of the finding. For qualitative part, the guideline which inquiries about the reason why they are faithful or not, respondents logical decisions in accepting or not accepting the message, perceived difference of message acceptors and rejecters, and preferred sources, message type, delivering style with some probing questions were prepared for students and teachers separately. Qualitative data were collected by principal investigator. Respective responses were recorded by using tape recorder and hand written notes.

Data quality management, processing and analysis

Questionnaires were translated to local language and then back translated to English to maintain its consistency. Training was given for data collectors and pre-test was done on 5% of the study subjects on similar population out of study area. Supervisors and principal investigator performed immediate supervision on a daily basis. In qualitative, the recorded voice was transcribed first in local language and translated to English and analyzed by OpenCode software. The collected data were entered in SPSS 16.0 version for analysis. For uniform scoring of items of five point Likert scale response format, negatively worded items were reversed. Descriptive analysis was used to describe the percentages and number of distributions of the respondents by socio-demographic characteristics, communication factors, past sexual behaviors, cues to action and the main constructs of extended parallel process model. Furthermore, bivariate and multivariable logistic regression analyses were used to identify the influencing factors using backward variable selection techniques. All explanatory variables that were associated with outcome variable in bivariate analysis with p-value of 0.25 or less were included in the initial logistic models. The crude and adjusted odds

ratios together with their corresponding 95% confidence intervals were computed and interpreted accordingly. A P-value < 0.05 was considered to declare a result as statistically significant in this study.

Ethical consideration

Prior to data collection, a formal letter was obtained from the faculty of medicine and health science office of Wachemo University and submitted to each school. All study respondents were informed about the purpose of the study and provided with written consent. All respondents' right to self-determination and autonomy were respected. Participation is voluntary and respondents can withdraw from the study at any time.

Result

Socio-demographic characteristics of the respondents

Four hundred eight respondents were participated in the study giving response rate of 96.0%. Accordingly, more than half, 56.6% (231/408), of the respondents were females. The mean age of the respondents was 17.2 ± 2.1 years (Table 1).

As far as the of participants of the in-depth interview and focus group discussions were concerned, nine interviewees from all school were approached that all of them were teachers holding positions of leadership in club and member of main streaming as a focal persons, the service years ranging from 1 to about 17 years and with 6 months to about 10 years of experience in HIV message preparation and/or participating. Two of them were females with age ranging from 25 to 39 years. When we come to FGD, it was conducted by involving students from the nine schools without class specification.

Variables	Categories	Frequency	Percent (%)
School name	Yekatit 25/67 school	179	43.9
	Wachemo preparatory	99	24.2
	Heto high school	63	15.4
	Private schools	67	16.4
Grade level	Nine	154	37.7
	Ten	140	34.3
	Eleven	56	13.7
	Twelve	58	14.3
Sex of the respondent	Female	231	56.6
	Male	177	43.4
Age of the respondent	10-14	33	8.1
	15-19	285	69.9
	20-24	90	22.0
Previous residence	Rural	276	67.6
	Urban	132	32.4
Marital status	Single	393	96.3

	Married	14	3.4
	Divorced	1	0.2
Religion of respondent	Protestant	263	64.5
	Catholic	52	12.7
	Orthodox	54	13.2
	Muslim	39	9.6
Ethnicity of respondent	Hadiya	245	60.0
	Kembata	54	13.2
	Amhara	51	12.5
	Silte	40	9.8
	Others*	18	4.4
Father's occupation	Farmer	206	50.5
	Employed	120	29.4
	Merchant	82	20.1
Mother's occupation	Housewife	290	71.1
	Employed	71	17.4
	Merchant	47	11.5
With whom you currently live?	With family	149	36.5
	Alone	136	33.3
	With friends	121	29.7
	With uncles and aunts	2	0.5

Table 1: Presents socio-demographic characteristics of the respondents of high school in Hossana town, Hadiya zone, Ethiopia, May 2013 (N=408).

*Guraghe, Tigre, Oromo, Wolaita

Knowledge about HIV/AIDS

In this study, all the respondents have heard of HIV/AIDS. With regard to faithfulness as HIV prevention method, 60.5% (247/408) of the respondent stated that faithfulness help to prevent HIV/AIDS. Finally, comprehensive knowledge among the respondents is 88.3% (361/408) which was computed from individual items of the knowledge questions.

Source and channels of information and their preference for information

Regarding sources of information, 80.1% (327/408) of the respondents reported health institutions while a little number can't recognize where they heard from. Concerning source preference, majority, 66.2% (270/408), of the respondents prefer health institution. Regarding the preference of channel, 66.9% (273/408), of the respondents preferred radio followed by television 55.6% (227/408) (Table 2).

Variables		Frequency		Preference	
		Yes	%	Yes	%
Sources	Health institutions	327	80.1	270	66.2
	School/Teacher	273	66.9	144	35.3
	Friends	231	56.6	171	41.9
	Religious institutions	205	50.2	144	35.3

	Parents	153	37.5	93	22.8
	PLWHA	142	34.8	85	20.8
Channels	Radio	297	72.8	273	66.9
	Peer discussions	266	65.2	259	63.5
	Television	234	56.9	227	55.6
	Printed materials: posters, leaflets	208	51.0	192	47.1
	Others*	12	2.8	12	2.8

Table 2: Presents frequencies of the sources and channels of information and their preference for information about HIV/AIDS with respective percentages among respondents of high schools in Hosanna town, Hadiya Zone, Ethiopia, May 2013 (N= 408).

*Funny talks and dramas

Message and message appeals of communication

Table 3 shows frequently heard messages, specific message and preferred message appeals for HIV/AIDS prevention. Being

faithfulness message was heard by 46.8% (191/408) of respondents following abstinence 52.9% (216/408) of respondents. With regard to message appeals, humour/dramatic appeals are preferred 86.5% (353/408) of the respondents followed by factual appeal 82.6% (337/408).

Variables (messages)		Yes	%	No	%
Frequently heard behaviors/ messages	Abstinence	216	52.9	192	47.1
	Being faithful	145	35.5	263	64.5
	Using condom	180	44.1	228	55.9
Preferred message appeals	Dramatic/humour	353	86.5	55	13.5
	Factual through education	337	82.6	71	17.4
	Fear arousal messages	138	33.8	270	66.2
	Two sided message	269	65.9	139	34.1
	One sided message	127	31.1	281	68.9
	Negative message	138	33.8	270	66.2
	positive message	195	47.8	213	52.2

Table 3: Presents frequencies of the frequently heard behaviors, and preferred appeals among respondents of high schools in Hosanna town, Hadiya Zone, Ethiopia (N= 408).

Perceived probability of infection and cues to actions

The constructs of EPPM was used to assess perception towards HIV as perceived susceptibility to and severity of HIV/AIDS, and perceived response efficacy and self efficacy of the recommended responses as

well. Table 4 present perceptions towards to HIV/AIDS and its prevention methods and presence of cues to faithfulness related information.

Components/constructs	Scale range	Scale mean	SD
Perceived susceptibility	9-45	26.0	5.9
Perceived severity	8-40	29.0	3.3
Weighted threat	17-85	0.6	0.2
Weighted efficacy	6-30	0.9	0.3

Self efficacy	4-20	11.2	4.5
Response efficacy	2-10	6.5	2.3
Cues to action	0-8	5.2	1.7

Table 4: Presents descriptive statistics for constructs of EPPM by their scale range of the respondents in high schools in Hosanna town, Hadiya Zone, Ethiopia (N= 408).

Category of respondents to being faithfulness as HIV/AIDS message

As far as category of respondents was concerned, 61.5% (251/408), of respondents were danger control/intended responses where as

38.5% (157/408) of the respondents were fear control/intended responses for being faithfulness message based on discriminative values (Table 5).

Outcome Variables		Total	
Variable		Danger Control	Fear Control
Sex	Male	107 (26.2%)	70 (17.2%)
	Female	144 (35.3%)	87(21.3%)
Total		251 (61.5 %)	157 (38.5%)

Table 5: Showing reaction to faithfulness message (Danger Control orFear Control) with their respective frequencies of the sex of respondents in hosanna high schools, Hadiya zone, South Ethiopia, May 2013 (N=408).

Regression analysis

Socio-demographic variables as predictor of faithfulness message reaction

Concerning socio-demographic variables as covariates (description in Table 1), school difference, age, previous residence, religion and fathers' occupation had significant statistically significant effect on message response. For example, those respondents who were from private schools as compared to Yekatit 25/67 high schools had higher odds of fear control responses for HIV prevention messages with odds ratio [AOR (95% CI)=7.77 (2.87-22.12)]. Meaning, those respondents from private schools were 7.77 times more likely to be in fear control/unintended response than Yekatit 25/67 high school (Table 6).

Variables	Categories	No	%	COR (95% CI)	AOR(95% CI)
School Name	Yekatit 25/67	179	43.9	1	1
	Wachemo P1 & P2	99	24.3	0.24(0.06-1.28)	0.73(0.10-5.25)
	Heto	63	15.4	2.88(0.40-20.92)	0.28(0.59-42.57)
	Private schools	67	16.4	3.84(2.66-11.11)*	7.77 (2.87-22.12)*
Age	Oct-14	33	8.1	2.86 (0.33-1.18)	2.44(0.63-1.28)
	15-19	285	69.9	1	1
	20-24	90	22	0.65(0.71-0.89)*	0.67 (0.34-0.78)*

Religion	Protestant	263	64.5	1	1
	Catholic	52	12.7	0.40 (0.22-0.72)*	0.34(0.18-0.63)*
	Orthodox	54	13.2	0.83(0.14-1.01)	0.49(0.13-1.84)
	Muslim	39	9.6	2.10(1.00-4.43)	2.00(0.90-4.43)
Monthly income of father	Farmer	206	50.5	1	1
	Employed	120	29.4	0.66(0.71-1.66)	0.51(0.33-1.88)
	Merchant	82	20.1	0.32(0.15-0.71)*	0.89(0.23-0.99)*

Table 6: Presents regression analysis to see the effect of socio-demographic variables in response categories in hosanna high school, Hadiya Zone, Ethiopia, May, 2013 (N= 408).

*Statistically significant at p value <0.05, 1 is odds ratio for reference category

NB: Variables indicated in the above table are significant in crude or/and adjusted or but those which are not significant in either of/ both cases are not indicated in the table

EPPM constructs as a predictor of faithfulness message reaction

Perceived probability of infection was seen as covariates. Perceived susceptibility, Perceived severity, Self efficacy and Response efficacy were found to be statistically significant variables. For instance, perceived susceptibility to HIV/AIDS had a statistical significant effect

on fear control response with [AOR (95% CI)=1.32 (1.44-1.82)] i.e. more likely to be in fear control response than those who are not from the model, the coefficient of susceptibility score implies those respondents who consider themselves as susceptible were 1.32 times (Table 7).

Components/constructs	Scale mean	SD	COR (95% CI)	AOR(95% CI)
Perceived Susceptibility	26.0	5.9	2.22(1.41-1.71)*	1.32(1.44-1.82)*
Perceived Severity	29.0	3.3	4.03(2.31-5.04)*	1.42(1.64-1.79)*
Self-efficacy	11.2	4.5	0.96(0.94-0.98)*	0.67(0.64-0.12)*
ResponseEfficacy	6.5	2.3	1.09(1.06-1.11)*	0.98(0.96-0.99)*

Table 7: Regression analysis to see the effect of EPPM constructs in message response categories of the respondents in hosanna high school, South Ethiopia, May, 2013 (N= 408).

*Statistically significant at p value <0.05

Message and message appeal as predictor of faithfulness message reaction

Concerning message and message appeals as predictor of faithfulness message response considering as covariates hear being

faithfulness message frequently and humour appeal had significant effect. Accordingly, respondents who did not hear being faithfulness message frequently had slightly higher odds of fear control responses with odds ratio [AOR (95% CI) = 2.46 (1.45-3.67)] than those heard being faithfulness message frequently. In parallel speaking, who heard are more protective (danger control) than who didn't hear (Table 8).

Variables	No	%	COR(95%CI)	AOR(95%CI)	
Frequently heard faithfulness message	Yes	179	44.1	2.06(1.01-4.21)*	2.46(1.45-3.67)*
	No	228	55.9	1	1
Dramatic/Humour appeal	Yes	353	86.5	1	1
	No	55	13.5	2.17(1.92-5.24)*	1.37(1.33-4.24)*

Table 8: Crude and adjusted odds ratio to see the effect of communication factors on being faithfulness message response categories of the respondents in hosanna high schools, Hadiya zone, southern Ethiopia, May 2013.

*Statistically significant at p value <0.05, 1 is odds ratio for reference category

Past sexual behaviors as a predictor of faithfulness message reaction

Risky sexual behaviors taken as variables of predictor of message responses by considering risky behaviors related to HIV, like ever had sex, age at first sex, kind of sexual partner, experience of testing after sexual intercourse and ever testing, and decision to have sex now and for future after having test. The crude and adjusted effects of these factors were seen following description of each behavior but no variables were statistically significant.

Final logistic model for prediction of faithfulness message reaction

In final multivariable logistic model, all the variables which were significant in bivariate analysis were fitted to predict message response by backward Likelihood regression method: the main constructs of the EPPM model, religion, age and not hearing faithfulness message were left over in the final model. Predicted final model (danger control as a variable of interest) = 0.32 (self-efficacy) + 0.82 (response efficacy) + 0.33 (religion being catholic) + 0.13 (age 20-24) - 4.42 (perceived susceptibility) - 5.33 (perceived severity) - 5.11 (hearing faithfulness message). The model explained about 59.04% of prediction of being faithfulness message reaction among respondents learning in the schools with goodness of fit of the model ($X^2/df= 5.81/8$, p value=0.44) (Table 9).

Variables in the Equation	OR	95% CI for AOR	
Age (20-24)	0.13	0.43	0.73
Didn't heard faithfulness message	5.11	6.91	17.08
Religion (catholic)	0.33	0.65	0.69

Fathers' occupation	3.31	5.55	19.08
Perceived Susceptibility	4.42	2.44	8.61
Perceived Severity	5.33	3.21	14.74
Self-efficacy	0.32	0.37	0.72
Response Efficacy	0.82	0.59	0.98
Constant	13.33		

Table 9: Multivariable logistic regression analysis for final model prediction of faithfulness message response among respondents of hosanna high schools, South, Ethiopia, May, 2013.

Discussion

This study followed flow of EPPM model, in EPPM someone perceiving susceptibility to and severity of ill health condition gets the force to engage on healthy behavior but think over the best path to be healthier which in turn helps individuals to go through the effective method which adds value for his/her health (response efficacy) provided that people are already awarded in a particular health threat since the model best works in situation where respondents have high level of awareness than motivational variables [1,4].

In this study, religion being catholic is more significantly positively attached with danger control responses as compared to Protestants. The potential reason of higher significant acceptance of messages among catholic religion may be most of the messages are imparted by foreigners since in our country catholic religion is working in connection with Italy. In qualitative part, *“with regard to message acceptance.....no matter how much we are committed to our religion; we are almost in line with the adoption and practice of different preventive methods even though it is not promoted in worship time. This is mainly because of the influence of teaching from different organization in general and religious involvement in governmental affairs in particular”*.

Father's occupation had significant effect in message responses. This is similar, to the study conducted in Addis Ababa on risk sexual behavior of in school youths that showed significant positive risk protective effect of monthly income [2]. In contrast to this findings, in qualitative part, one of the male informants from Yekatit 25/67 high school with age of 29 years said that *“sometimes parents are the agents for their siblings to push to sex by providing much money and on the other side...those female students who came from poor families have high tendency to be engaged in multiple sexual partners; so, both extremes are not good”*.

In this study, perceived susceptibility to HIV/AIDS directly attached with fear control response which in turn reduces the protective effects of the individuals increasing the likelihood of fear control response. Similarly, a cross sectional study conducted in Ethiopia on message response of Hossana college students were similar findings that a belief of personal perceived susceptibility to HIV risk in relation to condom use is low [9].

This study, concerning perceived severity of HIV/AIDS showed positive effect on fear control response. In line with this result in qualitative part, one of the female respondents with age of 18 years said that *“young generation wants to hear the message focus on being faithfulness (having boy/girlfriend); on the other hand those messages*

focused abstinence considered as layman teaching since this day is full of sexual intercourse. For frankly speaking, be faithful to one partner teaching is our heart beat since we need sex as everyone needs”. However, as compared to the finding of this study, the study conducted in Kenya at university students the results indicated that almost all the students perceived HIV and AIDS to be very serious resulting in lack of variance in the measure. The potential reason may be these generations are exposed for many advanced technologies and films which drive them to involve in sexual intercourse [10,11].

In this study, over all perceived self-efficacy of HIV/AIDS showed negative effect on fear control response which in turn enhances the protective effects of the individuals decreasing the likelihood of fear control response which really parallels with the idea of EPPM model in message evaluation since directly linked with danger control responses [12,13].

This study, concerning perceived response efficacy of HIV/AIDS showed negative effect on message response which in turn enhances the protective effects of the individuals reducing the likelihood of fear control response which exactly parallels with the idea EPPM model in message evaluation since directly linked with danger control responses. In qualitative part, one of the male respondents from private school with age 18 said that *“... personally I prefer abstinence. Faithfulness is also good if the two partners are faithful ...I think most of who are abstaining and who wants to be faithful share my idea...”* [14,15].

Concerning communication factors, respondents who did not hear being faithfulness message frequently had slightly higher odds of fear control than those heard being faithfulness message frequently. In other words, they are less protective than those who heard being faithfulness message frequently. In qualitative part, one of the respondents with age of 21 from Yekatit 25/67 high school said that *“...the message focuses on being faithfulness is more accepted than any other three and next to that abstinence;... in this age bracket since majority of students wants to engaged in sexual intercourseam not saying don't promote abstinence and condom use rather let us start our message from being faithfulness with tested partner which in turn helps to have significant reduction HIV infection”* [16,17].

This study uses EPPM for message evaluation as theoretical framework that outlines how to measure the components explicitly so that they are easily summarized. Qualitative and quantitative data were triangulated. May use for other researchers as baseline data/information since no local literature was stated in this discriminative scores. But, in reality, one limitation of model is it may have the gap between the actual behavior and psychological responses [18,19].

In conclusion, respondents' being in danger control or fear control response of message was determined mostly by individual perception on what they have for HIV and its prevention methods. Despite high proportion of students were in danger control psychological responses, there is similarity with current behavior of prevention of HIV/AIDS. As is, the main constructs statistical significance is congruent with the assumption and general idea of EPPM model. Generally, the independent predictors of the message response are the main constructs of EPPM model, religion, father's occupation, and faithfulness message hearing, either in danger control or in fear control response of message [20].

To schools, message developers, public health researcher and any organizations working in the area of HIV/AIDS prevention and control should follow the following recommendations:

Message developers, even though focus demands needs sacrifices, should tailor message based on respondents' age categories so that more acceptance in uniform categories is assured.

Message developers should have to consider the actual needs of the respondents through needs assessment to maximize perception of their risk of susceptibility and severity.

Schools should have continuous IEC/BCC intervention programs developing critical thinking between threat and efficacy segmenting in each religious view.

Schools should further promote both self-efficacy and response efficacy of being faithfulness.

Schools should give emphasis to ensure access for young people to sex education, HIV/STIs, including information about some misconceptions.

Researchers' should undergo further study on process of development of messages in different behaviors.

Competing Interests

The author declared that have no competing interests.

Authors' Contributions

I, Feleke Doyore, wrote the proposal, participated in data collection, analyzed the data and drafted the paper. Research committee approved the proposal with some revisions, supervised in data collection and analysis, commented on the analysis and improved the first draft. I revised subsequent drafts of the paper.

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