

Study of the Relation between Information Levels, Motivation and HIV Risk Perception and Risky Sexual Behaviors among Students of Razi University

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To fight with the spread of AIDS, the focus must be on increasing the acknowledgment and information about the ways in which HIV may be transmitted. This issue is important in decreasing the risky sexual behavior and thus is successful in reduction of HIV transmission. The purpose of this study is to examine the relation of information levels, motivation and risk perception of HIV morbidity risky sexual behaviors in the students of Razi University. The present study is a correlation study with a practical purpose. The target population includes all the students of Kermanshah Razi University studying during of 2010-2011 academic year. The sample consists of 375 male and female BA and MA students selected by stratified random sampling. The survey instruments include HIV information questionnaire, national AIDS questionnaire, international AIDS questionnaire and global positive attitude to AIDS questionnaire. Data were analyzed using multivariable regression method. The Findings have shown that there is a significant multiple correlation between the information level, motivation and risk perception of HIV morbidity with risky sexual behaviors ($r=0.636$). Perceived risk of HIV is more important in risky sexual behaviors than information and motivation.

Keywords: information level, motivation, risk perception of HIV, risky sexual behaviors

World Health Organization (WHO) reports indicate that around 60% of all the deaths worldwide are attributable to diseases caused by behavior-related risk factors (WHO, 2002). Currently, the management of chronic diseases that are causally related to human behaviors absorbs well over half of societies' health expenses (Baum and Posluszny, 1999). Examples abound: Human Immune deficiency Virus (HIV). The behavior of individuals has thus come to be closely implicated in efforts toward risk education (cf. Rothstein, 2003).

Acquired Immune Deficiency Syndrome (AIDS) which its cause is by Human Immune deficiency Virus (HIV), was first identified in 1981 by the United States center of control and prevention of disease in America, based on the reports of uncommon with pneumonia from *Pneumocystis carinii* pneumonia and Kaposi Sarcoma in gays (Svenson et al. 1997).

Since then about 30 million people have died from AIDS and at present, more than 33.3 million people are HIV positive (UNAIDS, 2010). Also according to the estimation of the UNAIDS (2009), more than 7000 people contract HIV/AIDS every day of which 97% belong to low and moderate earning countries. Among them, About 1000 are in children under 15 years of age and almost 6000 are in adults aged 15 years and older, of whom: almost 51% are among females and about 41% are 15-24 years old (UNAIDS, 2009). Reviewing epidemiologic data on patients with AIDS shows that in most cases, infection is affected during adolescence and youth (Mahajan, 2005); A remarkable number of the young adults have high risk behaviors that predispose them to infection (Blanchett, 2000). As a result, prevention from high risk behaviors related to AIDS in young adults is one of the most important preferences in public health (Noar, Anderman, Zimmerman, Cupp, 2004).

The Problem

In Iran, surveys by Health Ministry have indicated the rapid increasing high risk behaviors that can predispose people to contract HIV/AIDS. In other words, going up the marriage age in recent years has increased high

risk behaviors (Rahmati Najarkalae, 2009). Certainly the most important factor in prevention from HIV morbidity is to change the behavioral patterns including exposing oneself to high risk behaviors. The main question of this research is that if information level, motivation and risk perception of HIV have any relation with risky sexual behaviors?

The first step in changing behavior in the direction of a topic is to have knowledge about it, since knowledge is a precondition for changing people's beliefs and behaviors (Ebadi Fard, Fesharaki, Hedayat Rad, Mosavian pour, 2003). First, we must determine the person's present level of knowledge and information to do an appropriate educational planning. Therefore, a society's health can be promoted with the public correct knowledge of HIV/AIDS and preventive ways (Pakfetrat and Shahabi, 2004). Information level in this study is people's level of knowledge and awareness related to transmission and preventive ways of HIV. Motivation is all the conscious or unconscious factors of mental activity based on which our behavior and volition are made (Khodapanahi, 2005).

In the inclined behavior, people do something since they want it, have tendency toward it or need it. This is often a conceptualized object (Franken, 1998). In avoidance there is not only an important motivational distinction, but also is a basic approach which must be considered as a base for other motivational differences. In the present research, motivation is the tendency to avoid communicating with HIV patients. Risk perception is the subjective judgment on the features and intensity of risk (OCDE, 2003).

Risky sexual behavior, such as unprotected vaginal, oral, or anal intercourse, sex with multiple partners, and sex with high risk partners (i.e., intravenous drug users) can result in substantial negative outcomes. The cost of these behaviors to both the individual and society can be staggering. Engaging in risky sexual behavior also increases the likelihood of contracting HIV or other sexually transmitted diseases (STDS) (Joshua, Miller, Donald, Rick, Zimmerman, Logan, 2004).

This conceptual frame supposes that predisposing factors influencing sexual behavior through a wide range of moderate factors may include social demography (such as the first sexual relation, marital state, educational level, job position) or social mental factors (such as access to information, knowledge, attitudes, beliefs). The age of first sexual intercourse is associated with a long period of sexual activity, except cases in which the first intercourse is performed between spouses with two wives. Also tendency toward several sexual partners increases venereal diseases transmission (Dikson- Muler and Wasserheit, 1990; Konings, Blatiner, Levin, Brubaker, Siso, Shao, Goedert and Anderson 1994).

Marital state affects risk perception of HIV morbidity as well as sexual behavior. Although single females may have many potential to do safe sexual relations, the married meet more challenges because of the fear of their spouses sexual promiscuity leading to unwanted consequences such as separation or divorce. Most of the married females do unsafe sexual relations even if they know or suspect their partner has illegitimate relations (Blanc Wolff, Gage, Ezeh, Neema, & Ssekamatte-Ssebuliba, 1996). Although HIV cannot be transmitted through monogamy sexual intercourse, occasional presence of the married females partners or their illegitimate sexual relations can largely determine the risk of HIV transmission (Ahlburg, Jensen, & Perez, 1997).

Formal educational level may affect HIV risk perception as well as sexual behavior but it's not compatible with evidence. Carael (1995) found that occasional sexual activity has increased among high-level educated people. However, Meeker (1994) found that controlling the age can remove these relations. Awareness of HIV/AIDS has significantly improved in recent years and has been globalized. However, the relationship between knowledge and behavior is unclear yet. Risk perception in this study is the person's risk perception for his/her own AIDS morbidity. It means the extent to which people consider themselves exposed to AIDS. Sane Moghadam, Khorsravi, Abiz, Maraa'shi, Nahr Karoon, & Sarhadi,, (2010) studied Zahedan Azad University students'

awareness level, attitudes and performance regarding AIDS. Results showed that the level of awareness was good in 50.2%, of students, moderate in 44%, and weak in 5.8%. Also 17.1% of students had positive attitude, 56.9% had neutral attitude, and 25.9% had negative attitude. 12.1% of students had mistaken ideas about transmission ways of AIDS; for example, 13.9% of them considered mosquito's sting as a transmission way, 11%, joint swimming pool, 3.5%, joint WC, 11.9%, coughing 9.2%, kissing and 3.4%, shaking hands. There was a significant relationship between age, monthly income, and level of awareness ($P < 0.005$, $P < 0.001$, $P < 0.001$, respectively).

Karimi(2009) studied the health belief model of awareness, attitude and performance for HIV/AIDS on 58 hairdressers of which 59% were educated and only 1.1% were illiterate. 78% of the sample had good awareness, 49% had good attitudes and 58% had appropriate performance.

There was a significant difference between the average of all construct scores (including sensitivity, interests, perceived intensity) regarding the components of health belief model, before and after training ($P = 0.0001$). In the present research, radio was the main medium for training people on HIV/AIDS.

Priscilla, Akwara, Nyovani, & Hinde (2003) studied risk perception of HIV/AIDS and sexual behavior in Kenya. Findings showed that there was a strong positive relationship between risk perception of HIV and high-risk behavior for males and females; single males and females reported risky sexual behaviors more than the married. Also, there is a significant difference between ethnos and sexual behavior.

Information-Motivation and Behavioral Skills (IMB) Model

Several approaches (behavioral, cognitive, and biological) have tried to determine various factors related to risky sexual behaviors. One of these approaches is the cognitive-behavioral model in the form of information-motivation and behavioral skills (IMB) (Fisher, Fisher, Amico and Harman, 2006) Which studies risky sexual behaviors in different societies.

According to this approach, information and motivation are independent constructs that can affect morbidity risk of HIV/AIDS through behavioral skills. Also, to have safe sexual behaviors it is necessary to get information about the ways of HIV transmission, the disease itself and its virus. Based on this model, motivation has two levels: personal and social. It means that both person's attitudes towards sexual behaviors and his/her perception of social supports regarding safe sexual behaviors are important. In other words, person's motivation to have safe sexual behaviors is influenced not only by his/her personal feelings related to social supports, but also others' views about such behaviors.

Finally, according to this model (*Figure1*), behavioral skills refer to person's self-efficacy to do safe sexual behaviors. It can provide a theoretical base to recognize risky sexual behavior determinants in the young adults who are most disposed to show these behaviors.

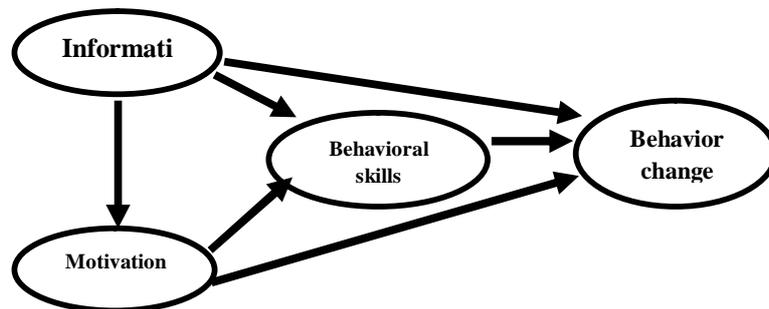


Figure1. IMB Model

The IMB model has been tested with a wide range of at risk populations. For example, Fisher and Fisher, Bryan and Misovich (2002) tested the model in high-school students. Although they supported structural validity of the model, it has not been much supported in high-risk populations. Bryan et al (2001), based on IMB, studied a preventive intervention related to HIV/AIDS in 250 Indian truck drivers. In this research, they evaluated sexual behaviors as well as wearing condom before and after intervention for 10 months. Intervention consisted of a

group meeting 5 interactive measures for HIV prevention associated with using IMB model as well as motivation for wearing condom. Findings confirmed the efficacy of this intervention. IMB had an effect on attitudes, norms, behavioral skills and particular purposes for wearing condoms in the married partners but it didn't have any effect on the structures of single partners. These findings provide an initial evidence for the efficacy of HIV prevention based approaches in Indian.

The goal of this research is to study the relation of information level, motivation and risk perception of AIDS morbidity to risky sexual behaviors.

Method

Respondents and Procedure

The research population includes all BA and MA Razi University students who studied during 2010-2011 academic year: they were 15000 people in number. The sampling method was stratified random sampling. The sample consisted of 375 male and female students, female (N=224) and male (N=151). Participants ranged in age from 18 to 30 years, were selected from 7 Razi University faculties (literature and Human Sciences, Social Sciences, Physical Fitness, Engineering, Basic Sciences, Agriculture, and Veterinary). The number of students in each faculty as well as their allocated percentages was based on Morgan Table. This is a correlation study.

Measurement Instrument: The Questionnaire

The research instrument includes a questionnaire to measure the variables (information, motivation, risk perception of HIV/AIDS morbidity, and risky sexual behavior) in this research. First, the questionnaire was translated into Persian then it was retranslated into English and the translation was confirmed. The Persian version was used Cronbach's alpha coefficient for this scale in the original version was achieved by Price and Mueller (1986; Hair et al, 2006) as 0.60. Cronbach's alpha coefficient for

this research was 0.73. This questionnaire measured information level on AIDS prevention, the motivation for avoiding communication with HIV patients, risk perception of AIDS morbidity and risky sexual behavior. Each question included 5 answers ranging from totally agreeable=5, agreeable=4, without opinion=3, to disagreeable=2, totally disagreeable=1 based on the likert scale (some questions scoring has been inverted). The questionnaire consists of the following four sub-questionnaires: HIV information questionnaire (Caryand Schroder, 2002), national AIDS questionnaire (Kaiser Foundation, 2000), international AIDS questionnaire (Davis et al, 1992) and global positive attitude to AIDS questionnaire (Kaiser Foundation, 2002). The research questionnaire was planned in two sections, personal features and questions related to hypotheses testing, which are described below:

The first section, personal features, includes four questions regarding age, sex, educational level and marital state. The second part includes some questions about hypotheses testing. The questionnaire items were measured and evaluated through factor analysis, then items related to the variables were differentiated and 38 items were selected. Questions 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 14, 30, 32, 33 and 34 were to measure the level of information; the scoring of questions 6, 9, 11, 13, 30, 32 had been inverted that is totally disagreeable=5, disagreeable=4, without opinion=3, agreeable=2, totally agreeable=1.

Questions 15, 16, 17, 18, 19, 20, 21, 22, 23, 29 and 35 were to measure the level of motivation. The scoring of all them except number 35 had been inverted. Questions 7, 27, 31, 36, 37 and 38 were to measure the risk perception of AIDS morbidity with the inverted scoring of number 27.

Questions 12, 24, 25, 26 and 28 were to measure the risky sexual behaviors with the inverted scoring of of all except number 28.

Cronbach's alpha was used to determine the reliability. Cronbach's alpha coefficient in the original version was achieved by Price and Mueller 1986; Hair, Black, Babin, Anderson, & Tatham(2006) as 0.60. It was 0.73 in this research Cronbach's alpha coefficient for the level of information

about transmission ways of AIDS and its prevention in this research was 0.79. It was 0.77 for avoidance motivation, 0.81 for risk perception and 0.77 for risky sexual behaviors.

The Methodology of Implementation

When the questionnaire was completed and the sample size was determined in each college based on the students proportion, the number of students was calculated for each college so that 57 (15.2%) students were from Social Science Faculty, 87 (23.2%) from literature and Human Science Faculty, 12 (3.2%) from Physical Fitness Faculty, 44 (11.73%) from Agriculture Faculty, 77 (20.53%) from Engineering Faculty, 92 (24.53%) from Basic Science Faculty, 6(1.6%) from Veterinary Faculty. Then the questionnaires were answered by the students.

Results

Table 1
Means and Standard Deviations of Research Variables

Variables	Mean	Standard Deviation(SD)	Minimum	Maximum	N
Information	57.41	5.89	37	80	375
Motivation	22.90	7.13	10	55	375
Risk Perception	22.09	2.95	5	30	375
Risky Sexual Behavior	12.48	3.02	4	25	375

As it can be seen in Table.1, the mean and standard deviation (SD) for information level are 57.41 and 5.89. The mean and SD for motivation are 29.90 and 7.13. The mean and SD for risk perception are 22.09 and 2.95, and the mean and SD for risky sexual behavior are 12.48 and 3.02.

Table 2
The Relationship between the Information Levels, Motivation and HIV Risk Perception with Risky Sexual Behaviors

R	R ²	F	Change Sources	Sum of Squares	Mean of Squares	DF	Sig
.636	.405	84.056	Regression	28.571	9.524	3	.000
			Remainder	42.035	.113	373	

As it is seen in Table 2, the results of the multivariable regression analysis show that there is a significant relationship between the linear combination of information levels, motivation and HIV risk perception with risky sexual behaviors at $\alpha=0.05$.

Below is a diagram (Figure 2) to show the relationship between variables as a model.

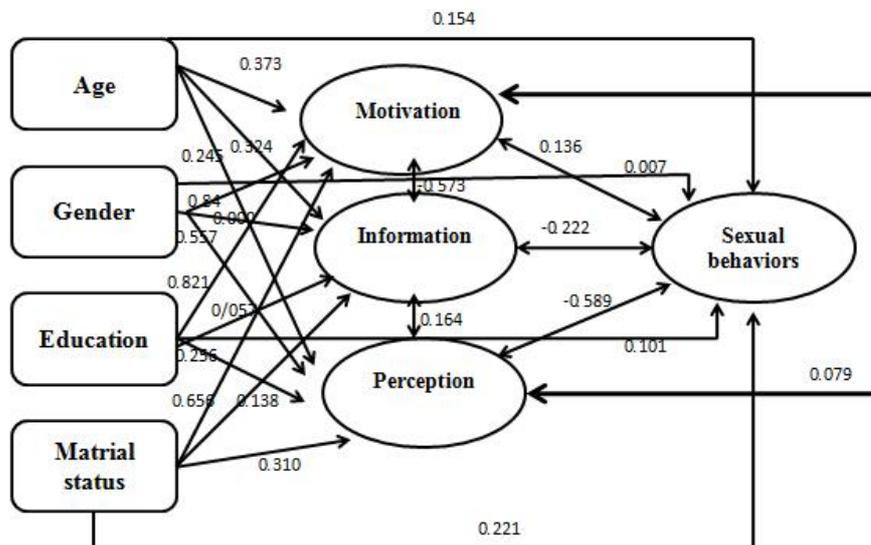


Figure 2. Relationship between Variables

Discussion and Conclusion

This investigation shows that there is a meaningful relation between information levels, motivation and risky sexual behavior in the students. This finding is consistent with the finding of Lotfipour Rafsanjani et al. (2011) which shows that the behavior would be improved with improving the information, thinking and function. Also this study is consistent with the finding of Mugnai et al, (2002) that the level of information about HIV has a relation with decreasing of the risk of sexual experience.

The result of Lanoti's study (2003) shows that the information about the ways which the HIV can be transmitted is high, while 0.93% of people in this study were aware about the risky ways in which HIV can transmit (such as sexual relation and uncontrolled blood injection), but the information level of the applicable ways to HIV prevention was low. The relationship between the risk perception with risky sexual behavior (both for males and females) is consistent with the findings of previous studies in Africa desert (Ingham and Holmes, 1991). Durojaiye (2009) Explained that the pandemic of HIV remains on the increase with young people at increased risk of infection. He observed that though, knowledge of some aspects of the disease was quite high in the study group, yet, low risk-perception hindered the commitment to behavior change.

According to findings person's behavior, irrespective of his/her cultural and environmental condition, is influenced by perception of the threatening dangers; The more the person feels he/she is threatened by dangers, the more he/she shows avoidant behaviors. Consistent with this finding is the idea of Reiner and Schupp (2005) that to feel danger is the essential condition for motivation to change risk behaviors (Reiner and Schupp, 2005; Reiner and Schwarzer, 2003). So if not being aware of a danger, there is no motivation for changing it.

Reviewing 46 studies based on health belief model, Carmel (1991; quoting from Mohammadi, 2006) concluded that perceived sensitivity has the most potential to predict behavior. If people are sensitive to a health matter and believe that they can be sick without showing a disease's

symptoms, it can lead to preventing them from taking risky sexual as well as AIDS morbidity. In this research, since the correlation of the variable level of information was higher than the correlations of other variables, it can be concluded that it is a stronger predictor for risky sexual behavior than information and motivation.

The results of the research showed that there is a significant difference between the means of males and females risky sexual behavior at the level of 95%. In general, males tend to show risky sexual behavior more than females (Oltedal and Rundmo, 2006). The results of several research studies confirm that the prevalence of risky behavior in boys is more than girls indicating that it is more likely that boys show risky behavior because of their more freedom, society different cultural view to males and females, and psychological and biological issues. T-test showed that there was a significant difference between the means of males and females information at the level of 95% (*Figure2*). The level of girls' awareness is more than that of boys. This finding is consistent with those of Ramazan Khani, Rostami, & Shokrolah (2003), Maswanya (2000), Hajeian Motlagh et al (2004), Brook (1999), Qodosi et al(2007), Mazlomi and Abasi Shavasi (2005), Molavai Nojomi et al (2002), Hadi and Mirzaei(2004) as well as Green et al,(1991). However the results of Behjati Ardakani (2000) studies showed that the level of boys' awareness of HIV/AIDS is more than that of girls. According to Mazner the book "The rules of epidemiology": females show more tendencies to medical cares, so they get more information. Also they are more sensitive about diseases than males, do more preventive attempts, and take therapeutic intervention more rapidly. The level of young generation information about the transmission and prevention of HIV has an important effect in society, because the information has an effect on the idea and thus the idea has an effect on the behavior. Awareness about HIV and its prevention in schools and universities decreases the risky sexual behavior and also could improve the young health.

A decade ago, the focus of HIV preventive attempts was on giving information about it to change behaviors through knowledge. The present research confirms the results of previous studies that improving the young people's knowledge is an essential factor, but it is not enough to make wide changes in those sexual behavior patterns which are dangerous for their health. Recently, preventive attempts focus on improving the information about HIV to promote behavior changes since to have enough information and knowledge is a precondition for changing people's beliefs and behaviors (Ebadifar et al, 2003). The first step in an appropriate training plan is to determine people's current level of knowledge and information. So public health can be promoted through correct knowledge about HIV and its prevention and management ways (Pakfetrat and Shahabi, 2004). Knowledge of HIV/AIDS is significantly associated with the level of education which might protect against HIV infection through information and knowledge that may affect long term behavioral change (Essien, Monjok, Chen, Abughosh, & Ekong, 2009).

The knowledge disseminated about HIV prevention is hinged around the ABC model. A stands for Abstinence B for Be faithful and C for condomization i.e., the use of condoms for prevention (Sowell, Seals, & Phillips, 1996).

The main goal of training people on HIV transmission and preventive ways is to reduce the risky sexual behaviors. All available aids as well as mass media must be applied to give people information on HIV. Furthermore, there is no limitation of time and age to get training, as everybody can start addiction from 9 years old to 65. Also, it may happen to anybody at any age or time to get blood transfusion, go to the barbers' or see a dentist, but those are given preferences whom either are exposed to risky sexual behaviors or have mistaken beliefs or thoughts.

All around the world, young adults are the main at risk group, so their training and increasing level of their awareness about HIV preventive attempts is the only available way to reduce the risk of HIV morbidity among them (Molavi Nojomi et al, 2002). However, studies have shown

that knowledge doesn't essentially lead to reduce risky sexual behaviors; the proportion of knowledge is significantly related to condom wearing and involving in safe sexual behaviors, but it is not enough alone (Sowell et al, 1996).

It can be concluded that training young people on sexual relation as well as hygienic matters of sexual behaviors is very important. The most important topic in training the risky sexual behaviors is to educate the healthy sexual behaviors. To know about people's health, we must consider their behaviors, he/she can judge better on his/her own health or his/her sexual partner's health. Therefore, to prevent from HIV contract in a society, we must train its people, especially young adults and juveniles, to have healthy behaviors. Regarding 22.5 million young adults in Iran who are considered as a risky group, the importance of education becomes more evident. Unfortunately, in Iran young adults are not so aware of the dangers of sexual relations. Risky sexual behaviors are an indisputable fact all around the world including Iran in which the danger of venereal diseases is more threatening because of being juvenile. Also, such a situation paves the way for contracting other Risky behaviors. In addition to the factors of knowledge and information in the present research, to prevent the spread of HIV we must consider other factors including HIV avoidance motivation as well as risk perception of HIV morbidity. Factors which may influence risk perception of HIV are social demography (such as the age of first sexual relation, marital state, educational level, job position) or psychological factors (like access to information, knowledge, attitudes, beliefs).

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Received: 6 / 11/ 2012

Revised : 29/ 8/ 2013

Accepted: 30 / 9/ 2013