

Predictive factors of behavioral intention in aids prevention in nursing and midwifery students at guilan university of medical sciences

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ABSTRACT

Introduction: Iran has been recognized as one of the most dangerous countries in the world for AIDS, and that the only effective way for fighting, is health education to a high-risk population and vulnerable groups. The purpose of this study was to determine the predictive factors of behavioral intention in AIDS prevention based on the Theory of Planned Behavior among nursing and midwifery students. **Materials and Methods:** In this descriptive correlational study, a total of 104 nursing and midwifery students at Guilan University of Medical Sciences participated in the study. Sampling was done using census method. The instrument for data collection was “AIDS Prevention Planned Behavior Scale.” The scale consists of three parts of demographic information section, the “theory of planned behavior” constructs including attitudes toward behavior, subjective norms, perceived behavioral control, and behavioral intention, and AIDS prevention behavior. Validity and reliability of the scale were examined and confirmed. Data were analyzed using SPSS software version 21. **Results:** Linear regression analysis showed that in total, 54% of the variance in the behavioral intention of AIDS prevention in nursing and midwifery students could be predicted by the constructs of perceived behavioral control and subjective norms. **Conclusion:** Given the high predictive power of perceived behavioral control and subjective norms in behavioral control, it is recommended that educational interventions based on “theory of planned behavior” be focused on these two constructs in the area of AIDS prevention behaviors.

KEY WORDS: AIDS prevention, Behavioral intention, Students, Theory of planned behavior

INTRODUCTION

AIDS epidemic is one of the most important health, social, and economical issues of humanity in today’s world and is one of the biggest problems and concerns in most countries of the world. Unfortunately, the number of AIDS cases is increasing. This phenomenon affects all aspects of life and existence of the suffered people due to its specific nature.^[1] Various statistics show that by 2018 >35 million people have died due to AIDS.^[2] According to the World Health Organization (WHO), Iran is one of the most dangerous countries in the world for infection to AIDS.^[3,4] It should be noted that there have always been many causes, including

increased risk behaviors, transmission through various ways, lack of vaccine, lack of access to effective treatment, as well as low level of community information on the issue.^[5] According to the WHO, 15 countries that implemented comprehensive HIV prevention programs have dropped by >25% in 2012.^[6] Therefore, the only effective way to fight AIDS is to educate health to high-risk population and vulnerable groups.^[7,8] On the one hand, health-care providers, especially nurses, midwives and students of these two disciplines, are the most vulnerable to the risk of infection with the AIDS virus. On the other hand, they are in a great position in preventing AIDS and educating the community. Therefore, improving their attitudes, beliefs and, finally, their health behaviors are quintessential.^[9-11] The value of an education depends on its impact and on the modification or creation of health behaviors. Educational impact depends also

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on the proper use of theories of behavioral sciences; hence, researchers rely on models in this respect.^[12] Research showed that the most effective educational programs are based on theory-based approaches that are rooted in models of behavioral change and that “theory of planned behavior” is a well-known one in this regard.^[13] According to the theory of planned behavior, the primary determinant of behavior is behavioral intention, which can indicate individual motivation for adopting a behavior, and behavioral intention is also derived from: Individual attitudes toward behavior, individual perception of social norms of others, and the environment of life and perception of the amount of control that he or she does to handle that behavior.^[14] Accordingly, the present study was conducted to determine the predictive factors of behavioral intention in AIDS prevention based on the Theory of Planned Behavior among nursing and midwifery students.

MATERIALS AND METHODS

In this descriptive correlational study, a total of 104 nursing and midwifery students in the 1st year at Guilan University of Medical Sciences participated in the study. The study began with the approval of the Ethics Committee of the Guilan University of Medical Sciences with the code number IR.GUMS.REC.1394.82 and the necessary coordination with the chancellor and university authorities. The instrument for data collection was “AIDS Prevention Planned Behavior Scale.” The scale consisted of three parts of demographic information section, the “theory of planned behavior” constructs including attitudes toward behavior, subjective norms, perceived behavioral control, and behavioral intention, and AIDS prevention behavior.^[15] The first part of the scale consisted of eight items related to demographic characteristics including student’s age, education level of parents, occupation, parental age, and household size. In the second part of the “Planned Behavioral Theory” constructs, there are 42 items and the third part, or AIDS prevention behaviors, consists of 10 questions, based on a 5-point Likert scale, for each item, in the form of completely disagree, disagree, no opinion, agree, and completely agree with a minimum and a maximum score of 1–5, respectively. The second part of the scale consisted of attitude toward behavior with 12 items with an achievable score range of 12–60, subjective norms, perceived behavioral control, and behavioral intention of each one with 10 items with an acquired scalable range of 10–50. Furthermore, the third part of the scale, i.e., AIDS Prevention Behavior included 10 items with the scalable range of 10–50. In the present study, content validity was used to assess the validity so that the scale was distributed among 10 experts and faculty members of the medical universities of the country (8 health specialist and

2 infection specialists) and its validity (content validity ratio 4) equaled 0.8 and content validity index was 0.82. Cronbach’s alpha test was run to measure reliability. For this purpose, the scale was provided to 20 nursing and midwifery students. It should be noted that these 20 subjects did not participate in the study anymore. The Cronbach’s alpha coefficient for the attitude structure was 0.71 and for the subjective norms were 0.75, for perceived behavioral control was 0.76, and for behavioral intention construct was equal to 0.85, and for AIDS prevention behavior was 0.75. Data were analyzed using SPSS software version 21.

RESULTS

Nearly 85.6% of the students were female and the mean age of students was 19.48 ± 1.04 years old. The mean age of their fathers and mothers was 50.46 ± 5.86 and 45.47 ± 5.27 , respectively, and the mean family size was 4.1 ± 0.8 . In terms of occupation, the highest frequency belonged to self-employment for fathers (46.2) and that most mothers were housewives (81.7). With regard to education level, 44.2% of fathers and 49% of mothers had high school and diploma levels, each of which represents the highest frequency percentage. It should be noted that 32.7% of fathers and 15.4% of mothers had a university education. Linear regression analysis in Tables 1 and 2 showed that a total of 54% of the variance in the behavioral intention of AIDS prevention among nursing and midwifery students could be predicted by perceived behavioral control constructs and subjective norms. Perceived behavioral control is the strongest construct associated with behavioral intention. In Table 3, the correlation test between the constructs of the theory of planned behavior showed that there is a stronger correlation between perceived behavioral control and behavioral intention of AIDS prevention than other constructs.

The purpose of this study was to determine the predictive factors of behavioral intention in AIDS

Table 1: Mean, standard deviation, the range of attainable score for each of the “planned behavioral theory” constructs

Variable	Mean±SD	Range of attainable score
Attitude	34.05±5.67	60–12
Perceived behavioral control	35.97±5.63	50–10
Behavioral intention	4.92±5.27	50–10
Subjective norm	29.27±4.52	50–10

Table 2: Correlation of planned theory constructs

	1	2	3	4
1. Attitude	-	-	-	-
2. Perceived behavioral control	0.121	-	-	-
3. Subjective norm	0.108	*-0.241	-	-
4. Perceived behavioral control	0.189	*-580.5	6-0.07	-

Table 3: The predictive power of the constructs of the theory of planned behavior on the behavioral intention of the AIDS prevention skill based on linear regression

Behavioral intention	B	SE	Beta	P value
Attitude	-0/026	0/073	-0/024	0/72
Subjective norm	0/504	0/094	0/368	0/0001
Perceived behavioral control	0/809	0/088	0/628	0/0001
Constant value	2/753	0/0495	--	0/0001

prevention based on the Theory of Planned Behavior among nursing and midwifery students. The results of the study showed that 54% of the variance in the behavioral intention of AIDS prevention among these students could be predicted by perceived behavioral control and subjective norm constructs. In this study, perceived behavioral control was recognized as the strongest construct related to intention. This finding is consistent with the results of Tafazoli *et al.* to the determinants of intention high-risk behaviors related to HIV in female sex workers^[16], Abamecha *et al.* on the predicting intention to use voluntary HIV counseling and testing services among health professionals^[17], studying Karimy *et al.* about predicting smoking behavior among a sample of Iranian medical students^[18], Saadeddin and Goodarzi, on predicting the behavior of IUD insertion in women of child bearing age^[19], Sacolo *et al.* in high risk sexual behaviors for HIV among the in-school youth^[20] and Guo *et al.* on predictors of intention to use condoms among college students regarding the intention to use condom.^[21] The perceived behavioral control construct is an important and effective factor in behavior and its absence in logical action theory is one of the greatest shortcomings of the theory. Adding this element led to a complete theory of “planned behavior.”^[22] Perceived behavioral control suggests that if people have more control over their behavior, they are more likely to be more motivated to adopt health behaviors.^[23] On the other hand, the results of this study were not consistent with those of the studies by Zeydi *et al.* regarding predicting factors of worker behavior for proper working posture based on planned behavior theory^[24] and Gholami *et al.* evaluating the predictors of fruit and vegetable consumption behavior in Ilam based on constructs of developed theory of planned behavior.^[25] According to studies, the reason for this may lie in the importance of the concept of perceived behavioral control in the occurrence and intention of high-risk behaviors.^[23,26]

In this study, the second predictive variable of AIDS prevention intention behaviors is the subjective norm construct. This finding is consistent with the study carried out by Bashirian *et al.* on application of the theory of planned behavior in predicting factors of substance abuse in adolescents^[27] and Moieni *et al.* on factors predicting drug and psychoactive abuse among Applicants for Driving License in

Hamadan using the theory of planned behavior.^[28] However, the findings are not consistent with the results of the studies by Ashoogh and Aghamolaei regarding utilizing the Theory of Planned Behavior to prediction the safety driving behaviors in truck drivers in Bandar Abass^[29] and Poulter *et al.* regarding an application of the theory of planned behavior to truck driving behavior and compliance with regulations, accident analysis, and prevention.^[30] The reason for this can be the difference in the choice of the type of subjective norm. In this study, the subjective norm is a group of peers, but in other studies, other types of subjective norm have been utilized. Peer education allows learners to better understand their values, learnings, feelings, and attitudes. Peer educators transfer information easier, since they have common backgrounds with their audience in terms of feature characteristics and problems.^[31,32] Students use social networks for training, social relations, communication, and professional business.^[33] Recently, many studies have conducted on stress and adaption, and some researchers have developed an interest in the realm of religion and spirituality as a possible source for individuals to apply when dealing with stress-inducing events in their lives such because illness interrupts the individual’s daily functions, social activities, and peace of mind.^[34]

Therefore, the subjective norm is an important factor in the intention to take AIDS preventive behaviors, and among them, peer education is the best type of subjective norm. Given the predictive power of perceived behavioral control and subjective norm constructs, it is recommended that educational interventions based on the “theory of planned behavior” focus on these two constructs in the context of AIDS preventative behaviors so as to witness the promotion of healthy behaviors in the community.

CONCLUSION

Perceived behavioral control and subjective norms are the predictors of behavioral intention to prevent AIDS among nursing and midwifery students. The limitation of this study was self-reporting. The need for educational interventions based on “theory of planned behavior” with an emphasis on the two predictive constructs seems quintessential.

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