Determinants of responsibility for health, spiritual health and interpersonal relationship based on theory of planned behavior in high school girl students

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Abstract

Background: Adolescence is a sensitive period of acquiring normal and abnormal habits for all of life. The study investigates determinants of responsibility for health, spiritual health and interpersonal relations and predictive factors based on the theory of planned behavior in high school girl students in Tabriz.

Methods: In this Cross-sectional study, 340 students were selected thorough multi-stage sampling. An author-made questionnaire based on standard questionnaires of Health Promotion and Lifestyle II (HPLPII), spiritual health standards (Palutzian & Ellison) and components of the theory of planned behavior (attitudes, subjective norms, perceived behavioral control, and behavioral intention) was used for data collection. The questionnaire was validated in a pilot study. Data were analyzed using SPSS v.15 and descriptive and analytical tests (Chi-square test, Pearson correlation co-efficient and liner regression test in backward method).

Results: Students’ responsibility for health, spiritual health, interpersonal relationships, and concepts of theory of planned behavior was moderate. We found a significant positive correlation (p<0.001) among all concepts of theory of planned behavior. Attitude and perceived behavioral control predicted 35% of intention of behavioral change (p<0.001). Attitude, subjective norms, and perceived behavioral control predicted 74% of behavioral change in accountability for health (p<0.0001), 56% for behavioral change in spiritual health (p<0.0001) and 63% for behavioral change in interpersonal relationship (p<0.0001).

Conclusion: Status of responsibility for health, spiritual health and interpersonal relationships of students was moderate. Hence, behavioral intention and its determinants such as perceived behavioral control should be noted in promoting intervention programs.

Keywords: Accountability in the health, Spiritual health, Interpersonal relationship, Theory of planned behavior, Girl students.


Introduction

Health-promoting behaviors are of the best ways to protect and control health leading a health-promoting lifestyle (HPL) (1). HPL is a balanced life that a person consciously chooses to perform healthy behaviors (2). HPL has six dimensions include physical activity, nutrition, mental health, interpersonal relations, responsibility for health and stress management (3). One of the most important elements of a healthy lifestyle is responsibility for health. In the healthy lifestyle, individual perform activities such as proper diet, sleep, activity and exercise, weight control, immunization against diseases, not smoking, and not

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Determinants of responsibility, spiritual health and interpersonal relationship

of society and constitute the foundation of family and community of health (13). The theory of planned behavior is in relation to health behaviors prediction (14). According to this theory, intention to perform a particular behavior is predictor of that behavior. Intention derives from attitude toward the behavior, subjective norms and perceived behavioral control (the perceived degree of ease or difficulty of adopting a behavior). Contribution of each factor in predicting the behavior is not constant and varies with the type of behavior and population studied (15, 16). This theory has been used in studies of diet, use of contraceptive pills, exercise, and health screening program for road safety (17). Given the lack of research in this field, the aim of this study was to determine the status of responsibility for health, spiritual health and interpersonal relations among girl students in two high schools in Tabriz based on the theory of planned behavior.

Methods
This is a descriptive cross-sectional study performed on 340 secondary school girls in Tabriz, in the year 2012 to 2014. After arrangements for implementing this study, girl high schools in Tabriz were selected through multi-stage random sampling. There are five educational districts in Tabriz; we selected two schools from each district randomly, and finally, one class was randomly selected in each school. The samples were second grade girls in public secondary schools and voluntarily participated in the study. Before the study, approval of the relevant authorities and school administrators was obtained. Selected students’ parents were assured of confidentiality of information and after obtaining informed consent to participate in the study, questionnaires were completed by students. Exclusion criterion was unwillingness of students to participate in the research.

The questionnaire was researcher-made based on the theory of planned behavior concepts using standard questionnaires for health-promoting lifestyle profile (HPLP II)
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such as father’s or mother’s educational level, occupation and age (p>0.05). Significant relationship was only observed between field of study and perceived behavioral control (p= 0.02), and the responsibility for the health (p= 0.001).

Pearson correlation coefficient test results showed that perceived behavioral control is negatively correlated with number of children, thus, with the increasing number of children, perceived behavioral control scores decreased (r=0.113 and p= 0.04). Of the three dimensions of lifestyle-promoting behaviors, responsibility for health and interpersonal relationship accounted for highest and lowest mean score, respectively (Table 2).

Results showed that 47.9% (n=162) of student had moderate attitude, 38.6% (n=131) moderate subjective norms, 45% (n=152) moderate perceived behavioral control, 47.9% (n=162) moderate behavioral intention and 35.1% (n=119) had poor behavior related to responsibility, spiritual health and interpersonal relations. Level of responsibility, spiritual health and interpersonal relations were moderate. Also, there was no significant difference in the categories- poor, moderate and good- of each concept.

The Pearson correlation coefficient test showed significant correlation between all constructs of the theory of planned behavior (correlations are significant at the 0.01 level). In addition, there were significant correlation between scores of constructs of

| Table 1. Frequency distribution of students’ demographic information |
|-------------------------|----------|----------|
| **Variable**            | **Number** | **Percent** |
| **Field of study**      |           |           |
| Mathematics and Physics | 104       | 30.6%     |
| Experimental sciences   | 126       | 37.1%     |
| Humanities sciences     | 110       | 32.3%     |
| **Father’s educational level** |   |           |
| Illiterate              | 18        | 5.3%      |
| Elementary              | 75        | 22.1%     |
| Junior high             | 87        | 25.7%     |
| High school             | 108       | 31.9%     |
| University              | 51        | 15%       |
| **Mother’s educational level** |   |           |
| Illiterate              | 29        | 8.5%      |
| Elementary              | 100       | 29.4%     |
| Junior high             | 77        | 22.6%     |
| High school             | 108       | 31.9%     |
| University              | 26        | 7.6%      |
| **Occupation of father** |           |           |
| Worker                  | 21        | 6.2%      |
| Self-employment         | 168       | 50%       |
| Employee                | 48        | 14.3%     |
| Other                   | 99        | 29.5%     |
| **Occupation of mother** |           |           |
| Housekeeper             | 316       | 93.5%     |
| Other                   | 20        | 6.5%      |
| **Number of children**  |           |           |
| One                     | 28        | 8.2%      |
| Two                     | 148       | 43.5%     |
| Three                   | 99        | 29.1%     |
| Four                    | 43        | 12.7%     |
| Five and more           | 22        | 6.5%      |
| **Number of birth**     |           |           |
| One                     | 154       | 45.3%     |
| Two                     | 99        | 29.1%     |
| Three                   | 44        | 12.9%     |
| Four                    | 28        | 8.3%      |
| Five and more           | 15        | 4.4%      |

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the theory of planned behavior and scores of responsibility for health, spiritual health and interpersonal relations. The highest correlation was between the scores of attitude and responsibility for health ($r=0.81$).

As seen in Table 3, based on linear regression test (backward method) from the constructs of the theory of planned behavior which had significant correlation with intention (attitude, subjective norms and perceived behavioral control, as independent variables), subjective norms did not predict behavioral intention and was removed from the model. But attitude and perceived behavioral control predicted %35 of behavioral intention changes ($p<0.0001$).

**Discussion**

Responsibility for health, spiritual health, and interpersonal relationship are important dimensions of HPL. The results of this study showed that the greatest and lowest scores are accounted for responsibility for health and interpersonal relationship, respectively. This finding is consistent with the result of study performed on Indian students (17). These findings are inconsistent with results of studies in health-promoting behaviors among middle school students in Qazvin and those from Japanese universities (18). This inconsistency may be related to the timing and research environment. Given these findings, focusing on the interpersonal relationships and spiritual health has priority in the interventional programs in this field. Responsibility for health means to understand what activities should be used to achieve a healthier lifestyle (19).

Adolescence is an important period for strengthening responsibility for health. Current findings were not similar to the results from a similar study on students of Yazd University of Medical Sciences (20).

Interpersonal communication required to achieve a sense of intimacy in meaningful relationships and reach to top position in interpersonal relations (19). The results showed that the students' interpersonal relationship had the lowest score. These findings are inconsistent with results of study in this field in Kuwait (21). The difference in findings may be related to the timing and research environment. Given these findings, more attention should be paid to interpersonal relationships. Our results showed no significant difference between the responsibility for health, spiritual health, and interpersonal relationship and variables such as parent education or occupation. Nonetheless, in some research parent’s education and occupation affected on lifestyle promotion behaviors (20, 22) and lifestyle promotion behaviors were significantly higher in those whose mothers were housekeeper. The reason may lie under that fact working mothers can change family traditions for a better participation in social activities. Working mothers with higher levels of education may play better role in health promotion

Perceived behavioral control could be defined as a person's feelings about performing or abandoning an action to the extent he/she feels it is under his/her control (23).

This study, increasing number of members in family were negatively correlated with

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility for health</td>
<td>90.6</td>
<td>73.12</td>
<td>55</td>
<td>120</td>
</tr>
<tr>
<td>Spiritual health</td>
<td>87.6</td>
<td>8.66</td>
<td>53</td>
<td>103</td>
</tr>
<tr>
<td>Interpersonal relationships</td>
<td>73.3</td>
<td>9.23</td>
<td>37</td>
<td>94</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>SE</th>
<th>p</th>
<th>Pearson Correlation</th>
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<tbody>
<tr>
<td>Attitude</td>
<td>0.277</td>
<td>0.024</td>
<td>0.0001</td>
<td>0.359</td>
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<td>Subjective norms</td>
<td>0.087</td>
<td>0.051</td>
<td>0.1300</td>
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<tr>
<td>Perceived behavioral control</td>
<td>0.322</td>
<td>0.061</td>
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<tr>
<td>Behavioral intention</td>
<td>0.219</td>
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**Table 2. Descriptive statistics for the responsibility for health, spiritual health and interpersonal relationships**

**Table 3. Linear regression (backward) model factors affecting on the behavioral intention**

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perceived behavioral control scores of students. The support of the family is one of the behavioral facilitating factors. According to the findings promotion interventions to support parents and families in this area should be noted on improving students' perceived behavioral control in relation to the promotion of healthy behaviors.

In this study concept of behavioral intention, as a predictor of behavior, correlated with attitudes and perceived behavioral control. This finding was in line with a study investigating application of theory of planned behavior in physical activities in adolescents of Qazvin (24). Therefore, strengthening of attitude, and perceived behavioral control may result in promoting behavioral intention. The results showed that attitude and perceived behavioral control can predict intention to change responsibility for health, spiritual health and interpersonal relationship to 35%. Blanchard and et al study showed that perceived behavioral control significantly predicted students' intention to consume fruits and vegetables (25). In a study designed to investigate the theory of planned behavior in 7 categories of health behaviors, including substance abuse, driving, eating, exercise, AIDS, and dental health, perceived behavioral control was the most important predictor of intention; subjective norm was not involved in predicting intention (26). Furthermore, promotion of responsibility for health, spiritual health and interpersonal relationship required attention to attitude and perceived behavioral control.

Limitations of this study were self-reporting questionnaire, no participation of boy students, and the results dependence upon time and place. A comparative study including boy high school students and data collection through interview and checklists is recommended.

**Conclusion**

The state of responsibility for health, spiritual health and interpersonal relationship was average. Therefore, while designing educational interventions based on the theory of planned behavior for these students, behavioral intention and its determinants such as attitude and perceived behavioral control as well as their field of education and number of children in family should be considered.

**Acknowledgments**

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