Research Paper

Investigating the Relationship Between Spiritual Health and Emotional Intelligence With Attitude Toward Smoking Among Nursing Students

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ABSTRACT

Background: Young individuals, such as students, are threatened by the use of tobacco products. Emotional intelligence and religiosity are protective factors against risky behaviors, such as smoking. This study investigates the relationship between emotional intelligence and spiritual health on nursing students’ attitudes toward smoking.

Materials and Methods: This correlational-descriptive study was conducted for three months with the available sampling method on all qualified undergraduate nursing students in 2022. A total of 283 nursing students willing to participate in the study completed the questionnaires. The data were analyzed using descriptive statistical methods, the Pearson correlation coefficient, and linear regression in the SPSS software, version 21.

Results: The Mean±SD age of the students was 22.74±3.26 years. There was a positive and significant relationship between spiritual well-being and attitude toward smoking (r=0.35, P<0.001) and also between emotional intelligence and attitude toward smoking (r=0.26, P<0.001). The data from multivariate linear regression analysis indicated that among the demographic information (spiritual well-being and emotional intelligence), spiritual well-being contributed more to explaining the attitude toward smoking (β=0.52, P<0.001).

Conclusion: Based on the results of the present study, the attitude toward tobacco is related to various factors, such as age, history of smoking, having an addicted friend, emotional intelligence, and spiritual well-being. Accordingly, by holding educational workshops, university officials can play an effective role in strengthening and developing the components of spiritual well-being and emotional intelligence to prevent students from smoking.
Introduction

Smoking is an important and preventable risk factor for the spread of diseases and the rise in morbidity and mortality rates, leading to premature death [1]. Smoking, along with subsequent injuries, is increasing worldwide [2]. Smoking is an unhealthy behavior that endangers public health and imposes significant costs on societies [3]. It also takes the lives of nearly six million people worldwide and imposes more than half a trillion dollars in cost annually [4]. Tobacco is used in different ways, including smoking, hookah, and chewing. The harmful effect of smoking has been known for many years [5].

According to studies, 47% of men and 12% of women smoke worldwide. There are nearly 100 million hookah users every day; in some places, the prevalence is higher than smoking [6, 7]. The number of hookah users is increasing in the world, and the highest prevalence of hookah use occurs in the Middle East and African countries [8]. Despite the harmful effects of tobacco, its use follows a significant trend in Iran and the world, and tobacco product use starts at a younger age [9-11]. Also, hookah smoking is common among young people in developed and developing countries of the world [12].

One of the harms that threaten young groups, such as students, is the use of tobacco products. According to the news published in 2010, 16.3% of students smoke cigarettes, making up 12% of society. Paying attention to such behaviors in adolescence and youth, especially during the student period, which is the time when the person’s identity is formed, is of great importance [3]. The results of a study showed that the percentage of cigarette and hookah smoking among students was 22% and 23.3%, respectively, and the main reason was entertainment [13]. The results of another study showed that medical students are prone to smoking cigarettes due to psychological pressures, which are probably related to the stress of their field of study [14].

Considering that the attitude toward smoking significantly increases the prediction of smoking behavior, investigating and identifying risk factors has been the focus of researchers [15]. According to the studies, drug abuse can be because of psychological processes. One of the effective psychological factors affecting people’s tendency to use drugs is emotional intelligence. This has attracted the attention of specialists and researchers in recent years [16, 17]. Emotional intelligence (EI) is characterized by a set of skills related to self-discipline, determination, and self-motivation, and it is important as a social and emotional skill for work achievement and job performance [18]. From a practical point of view, ignoring or lacking EI causes the situation to be poorly controlled [19]. EI is a predictor of success. People with high EI are suitable for stressful jobs, such as nursing [20]. The results of a study in Iran showed that EI can be a protective factor against high-risk behaviors, such as tobacco addiction [21].

On the other hand, faith and religiosity facilitate dealing with emotions and social conditions. Religious people turn to delinquency, substance abuse, alcohol, divorce, and suicide less frequently compared to non-religious people [22]. Spirituality can be a source of support by providing inner strength and helping a person find meaning in stressful situations [23]. Since each country’s spiritual and material resources are spent on students, it is necessary to know every factor that affects their physical and intellectual health and has a bad effect on their efficiency. However, few studies have addressed the variables, such as EI and spiritual resources among nursing students regarding smoking. University life brings along many problems as well as advantages among the young people. These problems can result from the student being far from their home and family, accommodation problems, being in a new circle of friends, taking the first step to acquire a profession, and having anxiety about finding a job after graduation. To cope with all these problems, students start smoking, and this behavior consequently becomes a habit [24, 25].

Students, particularly the ones studying in educational institutions, are at an important age about acquaintance with cigarettes and the permanency of this behavior. They must be responsible as they aim to be role models for society during their professional lives in the future. Thus, it is essential to reveal the smoking habits of nursing students and the factors affecting such habits [26]. Accordingly, this study investigates the relationship between EI and spiritual well-being in the attitude toward smoking among Faculty of Nursing and Midwifery students of Hormozgan University of Medical Sciences in Bandar Abbas, Iran.

Materials and Methods

This was a correlational-descriptive study. The study population included all nursing students at Faculty of Nursing and Midwifery of Hormozgan University of Medical Sciences, in Bandar Abbas, Iran, during the 2021-2022 academic year. The sampling was done using the census method. The research sample included quali-
fied undergraduate nursing students. The inclusion criteria were the willingness to participate in the study, not being a guest or transfer student, not being mentally and physically tired, not having an addiction to other drugs according to the person’s statement, and the absence of psychiatric treatment according to the student’s statement. Meanwhile, the exclusion criteria were incomplete questionnaires.

Data collection questionnaires and their validity and reliability

After obtaining permission from the nursing and midwifery faculty, data collection was carried out using a valid and reliable five-part questionnaire that included questions on demographic characteristics, emotional intelligence (28 questions) [27, 28], spiritual well-being (20 questions) [29, 30], smoking attitude (17 questions) [31, 32], and attitudes toward hookah smoking (12 questions) [33].

The Brad Berry-Greaves questionnaire

The Brad Berry-Greaves tool is an international standard emotional intelligence questionnaire that includes 28 questions in five dimensions as follows: General emotional intelligence (1-28), which are subscales of self-awareness (1-6); self-management (7-15); social awareness (16-20); and relationship management (21-28). The scoring method is by a 6-point scale (1-6). Scores range from 28 to 128. The sum of the scores obtained by the participants in each question forms the total score of the questionnaire. A higher score indicates a higher emotional intelligence. The reliability coefficients of the subscales were from 0.85 to 0.91 for the instrument, respectively [27].

After translation, the content validity of the Persian version of this scale was checked in the student community by 20 instructors. The content validity index was 0.89. To determine the criterion validity of the bar-on emotional intelligence questionnaire, the correlation coefficient was significant at the level of 0.99. Also, the reliability coefficient of this questionnaire was obtained at the Cronbach α of 0.88 [28].

Paloutzian and Ellison spiritual well-being scale

The spiritual well-being scale of Paloutzian and Ellison (1983) has 20 items and two subscales, namely existential health (10 items) and religious health (10 items). The items are arranged on a 6-point Likert scale from “completely agree” to “completely disagree”. The scoring is reversed in some questions. A higher score indicates a more increased spiritual well-being. The scoring of the spiritual well-being scale ranges from 20 to 100. The Cronbach α of the existential health subscale, religious health, and the whole scale were reported at 0.91, 0.93, and 0.88, respectively [29]. In the study of Yavari and Hasanabadi, the validity of the spiritual health questionnaire was determined through content validity, and its reliability was determined by the Cronbach α coefficient of 0.82 [30].

Attitude toward smoking questionnaire

In this research, the scale by Shore, Tashchin, and Adams was used to measure the attitude toward smoking. This questionnaire contains 17 items. The questionnaire is related to the attitudes toward smoking in different contexts (communication with smokers, restrictions and rules of smoking, and smoke-free environment) that assess the subjects’ attitudes toward smoking. The subjects answered each item on a 5-point Likert scale (1=completely disagree to 5=completely agree). Also, five items are scored inversely, meaning the answers to these questions indicate negative attitudes toward smoking. The score on this scale is between 17 and 85. A high score indicates a positive attitude of people toward smoking. In the study of Shore et al. (2000), the confirmatory factor analysis results on 284 non-medical students showed a good fit. The internal consistency of all 4 factors was from 0.69 to 0.90, respectively, and the Cronbach α of the questionnaire was 0.79 [31]. This questionnaire was translated and psychometrically evaluated by Rahimian et al. (2013) in Iran. The content validity index was obtained at 0.88, and its reliability was 0.78 using the Cronbach α method [32].

Attitudes toward hookah smoking

Danaei and Momeni (2017) designed the attitude toward hookah smoking questionnaire based on a literature review. This questionnaire includes 12 items in the field of measuring people’s attitudes toward hookah consumption. The items are scored based on a 5-point Likert scale as follows: “I completely disagree (1)”, “I disagree (2)”, “I have no opinion (3)”, “I agree (4)”, and “I completely agree (5)”. Due to the negative load of statements, items 4, 6, 7, 8, 9, 10, and 12 were scored inversely in data analysis. In this way, the minimum and maximum total attitude score for each subject could range from 12 to 60. A higher score indicated a more positive attitude of people toward hookah consumption. Meanwhile, 15 experts checked the content validity of the questionnaire. The content validity index was 0.81, and the questionnaire’s Cronbach α was 0.74 [33].

After entering the faculty, the researcher introduced himself, stated the study’s objectives, and selected the eligible students based on the list of nursing students. The researcher explained the research objectives to the students while observing the ethical considerations and asked them to complete the questionnaires if they wished to participate in the study and complete the consent form. In total, there were about 320 nursing students on the
faculty, of whom 8 students were transferred from other universities, and 4 students were undergoing psychiatric treatment according to their statements and according to the approval of their advisor. There were 8 incomplete questionnaires, and 17 students refused to participate in the study. Hence, a total of 37 students were excluded from the study. A total of 283 questionnaires were analyzed using descriptive statistics (Mean±SD, number, and percentage) and inferential statistics (independent t-test, one-way analysis of variance, the Pearson correlation coefficient, and linear regression) in the SPSS software, version 22.

Results

The Mean±SD age of nursing students in the present study was 22.74±3.26 years. The Mean±SD grade point average of the previous semester of second-semester students and higher was 15.96±2.45. The Mean±SD of the spiritual well-being, EI, and smoking attitude scores were 18.38±18.36, 115.85±20.33, and 61.68±12.61, respectively.

The results of the Pearson correlation coefficient test showed a positive and significant relationship between spiritual well-being and attitude toward tobacco (r=0.35, P<0.001) and between EI and attitude toward tobacco (r=0.26, P<0.002). However, there was no relationship between smoking attitude and age (r=0.001, P=0.99) (Table 1). The results of the multivariate linear regression test showed that among the variables EI, spiritual well-being, having smoking or addicted friends, and history of smoking by family members or relatives, spiritual well-being played a more critical role in explaining the attitude towards tobacco (P<0.001, t=3.51, β=0.59). The mentioned variables explained 0.37 variances in the attitude score toward tobacco (Table 2).

Table 1. Frequency distribution of demographic characteristics of nursing students in the present study (n=283)

<table>
<thead>
<tr>
<th>Variables</th>
<th>No. (%)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>147(54.1)</td>
<td>0.8</td>
</tr>
<tr>
<td>Female</td>
<td>136(45.9)</td>
<td></td>
</tr>
<tr>
<td><strong>Academic year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1st grader</td>
<td>54(13.7)</td>
<td>0.5</td>
</tr>
<tr>
<td>2nd grader</td>
<td>98(43.8)</td>
<td></td>
</tr>
<tr>
<td>3rd grader</td>
<td>74(27.4)</td>
<td></td>
</tr>
<tr>
<td>4th grader</td>
<td>57(15.1)</td>
<td></td>
</tr>
<tr>
<td>Middle school and lower</td>
<td>128(48.2)</td>
<td></td>
</tr>
<tr>
<td>Father’s level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-school diploma and associate degree</td>
<td>65(13.7)</td>
<td>0.77</td>
</tr>
<tr>
<td>Bachelor and above</td>
<td>90(30.9)</td>
<td></td>
</tr>
<tr>
<td>Mother’s level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle school and lower</td>
<td>83(15.1)</td>
<td></td>
</tr>
<tr>
<td>High-school diploma and associate degree</td>
<td>120(51.4)</td>
<td>0.71</td>
</tr>
<tr>
<td>Bachelor and above</td>
<td>80(23.9)</td>
<td></td>
</tr>
<tr>
<td>Having a smoking or addicted friend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>141(51.7)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>No</td>
<td>142(48.3)</td>
<td></td>
</tr>
<tr>
<td>History of smoking by the individual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>82(9.6)</td>
<td>0.92</td>
</tr>
<tr>
<td>No</td>
<td>201(90.4)</td>
<td></td>
</tr>
<tr>
<td>History of smoking by family members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>91(15.1)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>No</td>
<td>192(84.9)</td>
<td></td>
</tr>
</tbody>
</table>
Discussion

The results of the present study showed a positive and significant relationship between spiritual well-being and EI with the attitude toward smoking. There was a significant difference in attitude toward smoking scores by gender, history of smoking by family members, and having an addicted friend.

Based on the results of this study, there was a positive and significant relationship between spiritual well-being and attitude toward tobacco. According to the study by Gonçalves et al. (2017), the educational intervention did not lead to an improvement in students’ views on spiritual care; however, the participants had an increased understanding of drug abusers [22]. The results of a study by Yavari et al. (2014) showed that the effect of religious activity on cigarette and hookah consumption is mediated through negative beliefs about drugs, social modeling, and spiritual well-being. The results show the mechanisms through which religion affects smoking. Therefore, paying attention to these factors in drug prevention programs, especially tobacco, including cigarettes and hookah, can be useful as a gateway to the use of alcohol and other drugs [30]. Sharma et al. (2011) showed in a study in India that people with high nicotine dependence are involved in religious activities less frequently [34]. Similarly, Yong et al. (2009) found that religious norms are important in guiding behavior change, especially in tobacco control interventions [35]. Elkalmi et al. (2015) also found that Malaysian non-smoking students have a positive perspective on religious beliefs compared to smokers [36]. However, according to Bailey et al. (2015), in the United States, religious involvement in smoking cessation programs is ineffective. This report provides a preliminary overview of the role of spiritual aspects in the motivation to quit smoking, and these aspects are studied to investigate spiritual effects on smoking cessation behavior and thus encourage smokers to change their behavior [37]. Analyses show that Muslims smoke significantly less frequently than Christians. The highest levels of smoking characterize people not professing any religion [38].

Based on the results of this study, there was a positive and significant relationship between EI and attitude toward smoking. Johnson et al. reported a negative relationship between high scores on the emotional intelligence scale and low levels of acceptance of smoking, intention to smoke, and alcohol consumption [39]. The results of a study showed that EI acts as a protector against harmful behaviors, such as smoking. Nicotine dependence can be reduced by teaching emotional intelligence skills [40]. Ghasempour et al. reported a significant difference between EI scores in smokers and non-smokers. Considering that smoking is the result of the inability to control emotions and is a strategy to reduce tension, improving EI skills, especially self-control, can prevent people from smoking [41]. The results of Abdollahi et al.’s study showed that psychological hardiness and EI were protective factors against smoking among teenagers. Therefore, these findings strengthen the importance of teaching psychological hardiness and EI in preventing smoking in teenagers [42]. The results of a study by Hill (2019) indicated that EI may be a protective factor against smoking. EI is one of the psychological protection factors for a positive attitude toward smoking [43].

According to the results of the present study, there was a significant difference in the attitude toward smoking by gender, the history of smoking by family members, and having an addicted friend. The results of the study by Ghaderi et al. showed no significant relationship between any of the demographic variables, including age, gender, marital status, residential status, university, educational level, and overall grade point average, with the dependent variables of taking neuropsychiatric drugs, smoking, and alcohol [16].
The results of the study by Rajabi et al. (2021) showed that age and a positive family history of smoking increase the odds ratio of smoking [44]. The results of another study showed that the tendency to use hookah increases with age [45]. Various responsibilities of life and, subsequently, the resulting mental burden increase with age, and people turn to smoking to reduce the mental pressure caused by such responsibilities. The results of a study showed a higher tendency to smoke in individuals who had a smoking family member or friend [46]. Therefore, being in a group of tobacco users leads to the encouragement and persuasion of the person to use tobacco [44]. However, educational programs to reduce high-risk behaviors, such as smoking, are necessary for nursing students, especially those who have a positive family history of smoking or smoking friends.

**Conclusion**

According to the results of the present study, the attitude toward tobacco is affected by factors such as having a smoking or an addicted friend, a history of smoking by a family member, EI, and spiritual well-being. Therefore, university officials can play an effective role in strengthening and developing the components of spiritual well-being and emotional intelligence to prevent students from smoking by holding educational workshops. It is also beneficial to increase awareness of students and their family members and help them maintain their communications with friends who have healthy, safe social behaviors to prevent a positive attitude toward smoking.

**Study limitations**

One of the limitations of the present study is that this study was conducted only on university nursing students. To obtain more comprehensive results, it is suggested that this study be conducted on all medical students and elsewhere. In addition, nursing students should receive training to improve spiritual health and emotional intelligence and implement effective smoking cessation strategies.

**Ethical Considerations**

**Compliance with ethical guidelines**

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**Authors’ contributions**

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**Conflict of interest**

The authors declared no conflict of interest.

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