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ASSESSMENT OF HEALTH PROMOTING LIFE STYLE BEHAVIORS AMONG SAUDI ARABIAN UNIVERSITY STUDENTS

AVALIAÇÃO DE COMPORTAMENTOS DE ESTILO DE VIDA PROMOVENDO A SAÚDE ENTRE ESTUDANTES UNIVERSITÁRIOS DA ARÁBIA SAUDITA

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ABSTRACT

University students worldwide are sedentary and have unhealthy lives. As a result, the idea of health promoting universities was developed to address this issue. Despite its enormous impact on university students' health, the notion of health promoting institutions has not yet been properly explored internationally. The main purpose of the present study is to identify the level and factors associated with health promoting life style behaviors among Saudi Universities Students. a cross-sectional study was used to assess health promoting behaviors among nursing students in Saudi Arabia. Convenient sampling method was done on 727 participants. Health-Promoting Lifestyle Profile (HPLP) scale adopted from Walker et al. (1987) based on the Pender's health-promoting model was used in the current study. Different statistical procedures were done to achieve the study objectives. The total mean score of health promoting behavior among study participants is 121.52±19.35. The highest mean score of health promoting behavior domain was observed in Spiritual growth (2.65± 0.50), while the lowest mean score was observed in Physical activity (1.90± 0.59). Results showed that there is no significant difference in the mean score of participants' health promoting behavior with regards to their gender, age, income, marital status, level of study, smoking status ($p>0.05$). Health insurance showed significant association with health promoting behavior ($p<0.05$). This research demonstrates how having health insurance may effectively affect the health-promoting behaviors of nursing students. In order to assist university administrators and personnel in the development of strategies that are more efficient in fostering health-promoting habits among nursing students, the research offers recommendations.

Keywords: Health. Life Style. Behaviour. Student.

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RESUMO

Estudantes universitários em todo o mundo são sedentários e têm vidas pouco saudáveis. Como resultado, a ideia de universidades promotoras de saúde foi desenvolvida para abordar esta questão. Apesar de seu enorme impacto na saúde dos universitários, a noção de instituições promotoras de saúde ainda não foi devidamente explorada internacionalmente. O principal objetivo do presente estudo é identificar o nível e os fatores associados aos comportamentos de estilo de vida que promovem a saúde entre estudantes de universidades sauditas. um estudo transversal foi usado para avaliar comportamentos de promoção da saúde entre estudantes de enfermagem na Arábia Saudita. Método de amostragem conveniente foi feito em 727 participantes. Escala Health-Promoting Lifestyle Profile (HPLP) adotada de Walker et al. (1987) baseado no modelo de promoção da saúde de Pender foi usado no presente estudo. Diferentes procedimentos estatísticos foram realizados para alcançar os objetivos do estudo. A pontuação média total do comportamento de promoção da saúde entre os participantes do estudo é de 121,52±19,35. O maior escore médio do domínio comportamento de promoção da saúde foi observado no crescimento espiritual (2,65± 0,50), enquanto o menor escore médio foi observado no domínio atividade física (1,90± 0,59). Os resultados mostraram que não há diferença significativa na pontuação média do comportamento de promoção da saúde dos participantes em relação ao sexo, idade, renda, estado civil, nível de estudo, tabagismo ($p>0,05$). Plano de saúde apresentou associação significativa com comportamento de promoção da saúde ($p<0,05$). Esta pesquisa demonstra como ter seguro de saúde pode efetivamente afetar os comportamentos de promoção da saúde de estudantes de enfermagem. A fim de auxiliar os administradores e funcionários universitários no desenvolvimento de estratégias mais eficientes na promoção de hábitos de promoção da saúde entre estudantes de enfermagem, a pesquisa oferece recomendações.

Palavras-chave: Saudável. Estilo de vida. Comportamento. Estudante.

Introduction

Taking charge of one's own health at a time when one is often expected to be in excellent to very good health is just one of the many new issues that emerging adults face during their time in university. Such conditions are especially difficult for first- and second-year students because they are less familiar with the healthcare system and the resources available for health promotion in their community (Kühn et al., 2022).

According to self-reports and accelerometry data, colleges reflect a situation where students spend a lot of time sitting (Paulus et al., 2021). As physical activity and sedentary behavior are substantially connected with quality of life (Nowak et al., 2019), perceived health (Pengpid & Peltzer, 2019), or stress, anxiety, and depression, this may have negative effects on academic performance and general health (Xu et al., 2020; Tan et al., 2020).

While preparing for future employment and professional tasks, health-promoting aspects are crucial (Nunstedt et al., 2020). Furthermore, maintaining physical and mental health and lowering the risk of non-communicable illnesses are all benefits of leading a lifestyle that includes sufficient physical exercise, diet, rest, and abstinence from harmful substances (Shekhar et al., 2022). According to Tafireyi and Grace (2021), university students worldwide are sedentary and have unhealthy lives. As a result, the idea of health promoting universities was developed to address this issue (Tafireyi & Grace, 2022). Despite its enormous impact on university students' health, the notion of health promoting institutions has not yet been properly explored internationally (Reis et al., 2018).

Household income (Veenstra & Vanzella-Yang, 2020) and lifestyle characteristics such as dietary habits (Williams et al., 2020), physical activity, strength training (Reuter & Forster, 2021), and sleep (Gianfredi et al., 2018) have been linked to students' health and academic performance. Additional research has shown that college students are at risk for mental health illnesses including sadness and anxiety due to physical issues such neck, shoulder, and back discomfort, as well as daytime drowsiness and sleep debt (Ahlstrand et al., 2022).

Research suggests that around 70% of non-communicable illnesses, often known as civilization diseases, such as cancer, cardiovascular disease, cerebrovascular accident, hypertension, diabetes, chronic obstructive pulmonary disease, and obesity, are linked to an individual's lifestyle behaviors (Al-Momani, 2021). Also, as behavioral changes are more difficult to accomplish in later life, the university years are typically accompanied by new harmful behaviors and routines that might affect students' health and lives throughout adulthood (Martins et al., 2020).

Additionally, university life is full of impulsivity and vulnerability, which is influenced by peer gatherings and media impact and results in changes in students' views and behaviors as they develop emotional and other abilities (Bastani et al., 2018). There is a need to improve and encourage healthy lifestyle behaviors among Saudi university students given the positive results of the health promoting lifestyle

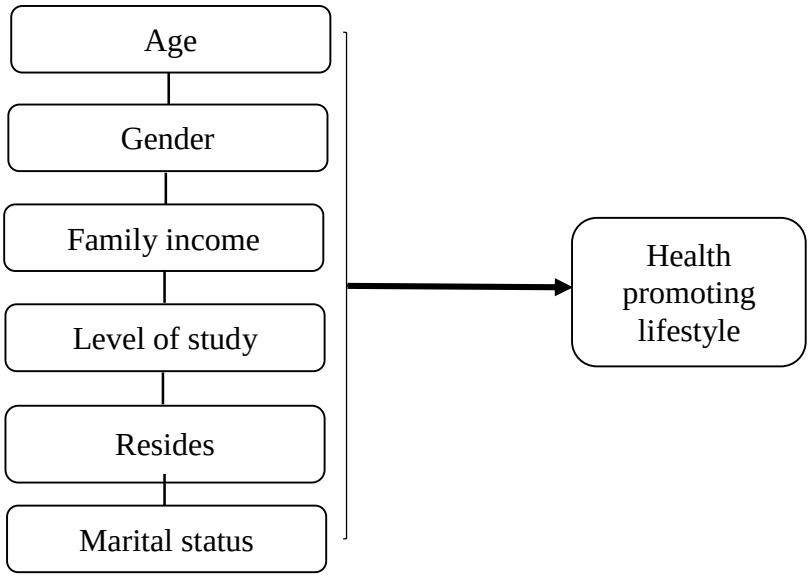
survey (Al-Momani, 2021). Another Palestinian research found that among the health promoting lifestyle behaviors, physical exercise scored the lowest (Fashafsheh et al., 2021). The main purpose of the present study is to identify the level and factors associated with health promoting life style behaviors among Saudi Universities Students.

Theoretical Framework and Literature Review

Theoretical Framework

The Pender health promotion model was used as a framework to direct this investigation. The third edition of Health Promotion in Nursing Practice was when this model initially made an appearance (Pender, 1996). This model is an effort to show the multifaceted nature of individuals interacting with their interpersonal and physical surroundings in order to achieve health. Within the context of a nursing viewpoint on holistic human functioning, the model incorporates concepts drawn from both social cognitive theory and the expectancy-value theory. This model involved several domains: 1) Prior Related Behavior; 2) Personal Factors; 3) Perceived Benefits of Action; 4) Perceived Barriers to Action; 5) Perceived Self-Efficacy; 6) Activity-Related Affect; 7) Interpersonal Influences; and 8) Situational Influences (Pender, 2015).

Figure 1 – Conceptual framework of study



The figure illustrates the conceptual framework of the present study. Factors in the left side represent the independent variables (age, gender, family income, study level, marital status, and residence, etc.) that are hypothesized to affect the dependent variable (health promotion lifestyle) at the right side.

Evidenced review

A healthy lifestyle is described as the capacity to maintain control over all behaviors that may have an effect on an individual's health and to organize one's daily activities in a manner that chooses behaviors that are suitable to one's current state of health (Aygar et al., 2019). Pender defined health promotion as the desired behavioral endpoint or outcome of health decision making (Kara & İşcan, 2016). Health-promoting lifestyle is defined as individual performance of health responsibility, physical activity, nutrition, interpersonal relations, spiritual growth, and stress management in his or her life (Pender et al., 2010).

Spiritual development, health responsibility, interpersonal connections, stress management, physical exercise, and nutrition make up the six components of a health-promoting lifestyle. People are given the tools necessary to take control of the elements that affect their health and, when necessary, to make changes to their

lifestyle in order to either enhance or maintain their health. This is accomplished via the practice of health promotion. (Fashafsheh et al., 2021).

The years that college students spend in university are formative years that are marked by significant physical development, important shifts in social roles, and alterations in behaviors that are relevant to their health. Studies conducted all around the world have shown that young people are more likely to engage in hazardous behaviors and unhealthy lifestyles, such as smoking, eating unhealthy foods, experiencing greater stress, being physically inactive, engaging in risky sexual behaviors, being injured, and being violent (Al-Momani, 2021).

In other words, engaging in proactive activities for the sake of self-actualization and improvement, in addition to illness treatment and prevention, is what is meant by the term "health promotion behaviors" (Kim & Kim, 2018). Nursing students, who will one day be practicing medical professionals, play a crucial role in ensuring the general public's health. (Evans et al., 2019). Although 91% of students in Germany met the recommendations for aerobic physical activity, just 30% of students met the standards for muscle strengthening activities, and 44% of students showed high levels of sedentary behavior, according to a cross-sectional study conducted in Germany. In the same vein, less than ten percent fulfilled the requirements for the intake of fruit and vegetables, more than forty percent of the students reported sleep impairment, and more than thirty percent consumed dangerous amounts of alcohol (Müller et al., 2022).

In a study conducted by Müller et al. (2022), a larger percentage of females were found to have fulfilled the criteria for aerobic physical activity. This contradicts the findings of other researchers who reported either no sex differences (Wilson et al., 2019) or higher aerobic physical activity among males (Murphy et al., 2017). University students, on average, sit for longer periods of time than the average young adult, making them more sedentary than their peers in the broader population (Castro et al., 2020). Meals that are made at home have a number of advantages, including the reduction in the size of portions eaten, the consumption of foods that are healthier (containing less fat, salt, sugar, cholesterol, and calories),

and an increase in the likelihood that the individual will not consume fast food, in addition to the achievement of FVC and nutritional targets (Bernardo et al., 2021).

Among nursing students in Palestine, a cross-sectional research discovered that spiritual development had the highest mean, while physical exercise had the lowest behaviors. The study also showed that gender and the spiritual growth subscale varied considerably from one another (Fashafsheh et al., 2021). According to the findings of a research that was carried out by Kim and Kim (2018), individuals exhibited more health promotion behaviors when they had greater levels of health cognition, health perception, and self-esteem.

The harmful behaviors of nursing students are the same. If interventions to foster healthy behaviors among the nursing students of the future are designed and implemented, it may serve as the basis for continuing health-promoting behaviors when these students become registered nurses (Evans et al., 2019).

Medical students in Saudi Arabia were given an average score of 3.39 out of 5 possible points for their overall health-promoting behaviors. The mean score for spiritual development was reported to be the greatest, while the mean score for health responsibility was reported to be the lowest. Furthermore, the BMI data suggested that one-third of male students were either overweight or obese (Al-Momani, 2017). In addition, a research carried out in Iran found that the health-promoting behaviors of 82.45% of college staff and students fell into the moderate to low range, and that there was no significant relationship between the people' age, gender, marital status, or employment and their health-promoting behaviors (Dargahi et al., 2022).

The majority of the relevant research that has been conducted throughout the world has been on the health behaviors of students. This includes studies conducted in Southern Europe (Kritsotakis et al., 2020), Asia (Mak et al., 2018), and Australia (Whatnall et al., 2020). On the basis of this, the World Health Organization suggests implementing health-promoting initiatives such as increasing one's level of physical activity (WHO Guidelines on Physical Activity and Sedentary Behavior, 2020). Enrollment in health-related university courses has been shown to be

associated with higher levels of health promotion abilities among students, which is another positive link that is beneficial to health (Doumit et al., 2022). Therefore, improving students' health literacy may serve as a means of bolstering the health-promoting resources available to them. Students enrolled in bachelor's degree programs in health and social work were included in a study that included an intervention that used didactical approaches such as peer mentoring and team teaching. The study found that students in the intervention group showed significant improvements on self- and social competencies compared with controls (Limarutti et al., 2021).

One recent research conducted in Sweden found that 15.2% of nursing students were enrolled in social work programs, while 84.8% of nursing students were enrolled in healthcare programs. Furthermore, the study found that felt well-being and the absence of sleeping issues were significant predictors of greater overall health. In addition to this, a stronger feeling of coherence was significantly predicted by less time spent sitting and a lack of a smoking habit (Ahlstrand et al., 2022). Different findings were found in Australia, where university students had high rates of unhealthy lifestyle behaviors and related health risk factors. Specifically, 89.5% of the students did not meet the vegetable recommendations, 50.3% exceeded the lifetime risk guidelines for alcohol intake, and 38.1% did not get enough physical activity (Whatnall et al., 2020).

Materials and Methods

Study Design, Setting, and Sample

The present study adopted a quantitative analytical cross-sectional design that involves the collection of data at one point in time, in which all phenomena under study are captured during one data collection period. The study was conducted at King Saud University in Saudi Arabia.

The population of this study involved university nursing students who are studying at King Saud University, Riyadh Saudi Arabia. The total number of them is

800, in which all of them were invited to participate in the present study. In which out of 800, 727 nursing students responded to the study questionnaire. Convenient sampling methods was used to collect data.

Data Collection

Regular university students who are studying at King Saud University were included to participate in the present study. Ethical approval was obtained from authorized persons and research director. Researcher applied inclusion and exclusion criteria based on the study. Participants were recruited to participate in the study following their voluntary consent; anonymity was used to ensure the participants' ethical considerations. Questionnaire was administered to the selected participants electronically, and data was collected over a period of one month.

Study Instrument

Valid questionnaire was used to collect data from participants. The questionnaire was originally published in English, but it was distributed in Arabic after being translated by the researcher and validated by translation experts. The questionnaire involved three main parts. The first part includes personal characteristics of participants such as their age, gender, education, marital status, etc. The second section discusses health status factors such as health insurance and smoking status.

Third part include assessment of health promoting lifestyle. This part was adopted from Health-Promoting Lifestyle Profile (HPLP) scale adopted from Walker et al. (1987) based on the Pender's health-promoting model was used in the current study. The questionnaire involves 52 items, and the participants were asked to give their responses on a 4-points Likert scale as: 1=never, 2=sometimes, 3=frequently, 4=regularly. The lowest score of this scale is 52, while the highest score is 20. The higher scores indicating greater engagement in health promoting behavior.

The overall score on the HPLP II is 208, then broken down into a further four categories: poor, for the range ranging from 52 to 90, moderate, for the range

ranging from 91 to 129, good, for the range ranging from 130 to 168, and excellent, for the range ranging from 169 to 208. When it comes to health-promoting habits, higher scores across the board indicate more frequency. This questionnaire involved six subscales: 1) health responsibility (9 items), 2) spiritual growth (9 items), 3) physical activity (8 items), 4) interpersonal relationships (9 items), nutrition (9 items), and stress management (8 items).

Statistical Management

The researcher used Statistical Package for Social Sciences version 26 to make an analysis of the data. The statistical tests that were used include both descriptive statistics, such as frequencies, means, and standard deviations, and inferential statistics, such as the independent sample t-test and one-way ANOVA. One-way an ANOVA was used to investigate the differences in the levels of participants' health promoting lifestyle behaviors with regard to categorical (more than 2 categories) independent variables such as education, age, and marital status. Independent sample test was used to investigate the differences in the levels of participants' health promoting lifestyle behaviors with regard to categorical (more than 2 categories) independent variables such as gender.

Ethical Considerations

The researcher was committed to all required ethical considerations for this study. Ethical approval was granted after permission from the Institutional Review Board. Furthermore, participants in the study were informed that there was no risk in participating in this study. Participation in the study were also anonymous. Before filling up the questionnaire, a complete explanation was given to all participants, and they were asked to give their voluntary consent before filling up the questionnaire.

Results

In the present study, 727 participants responded to the study questionnaire, 86.1% of them were females, while 13.9% were males. Regarding age groups of participants, those who are 36-45 years old constitute 33.4% of the study sample, those who are 26-35 years old constitute 27.9%, and those who are 45 years or higher constitute 21.3% of the study sample. Furthermore, more than half (71.3%) of participants in the study were married, while 21.6% were singles. Results also showed that, 41.4% have family income of 10000 SAR and more, and 33.8% of them have family income 5000 - below 10000 SAR. In addition, more than half (61.5%) of the participants were in fourth level of study, while 23.2% were in the third level (Table 1).

Table 1 – Sample Distribution According to The Participants' Demographic Factors

Variables	Frequencies	Percentage (%)
Gender		
Male	101	13.9
Female	626	86.1
Age groups		
≤ 25 years	126	17.3
26 - 35 years	203	27.9
36 – 45 years	243	33.4
More than 45 years	155	21.3
Income		
Below 5000 SAR	180	24.8
5000- below 10000	246	33.8
10000 and more	301	41.4
Marital status		
Single	157	21.6
Married	518	71.3
Divorced	39	5.4
Widowed	13	1.8
Study level		
First	53	7.3
Second	58	8.0
Third	169	23.2
Fourth	447	61.5

Regarding health promoting behaviors, the total mean score of health promoting behavior among study participants is 121.52±19.35. The highest mean score of health promoting behavior domain was observed in Spiritual growth (2.65± 0.50), followed by Interpersonal relations (2.59± 0.44). On the other hand, the lowest mean score was observed in Physical activity (1.90± 0.59), followed by Health responsibility (2.13± 0.49). The rest of other domains were illustrated in Table 9. The mean and standard deviation of each item within each domain are illustrated in tables 3, 4, 5, 6, and 7.

Table 2 – Health promoting behaviors in all domains

Domain	Min. score	Max. score	Mean ± SD
Spiritual Growth	1	4	2.65 ± 0.50
Interpersonal Relations	1	4	2.59 ± 0.44
Stress Management	1	4	2.37 ± 0.45
Nutrition	1	4	2.30 ± 0.41
Health Responsibility	1	4	2.13 ± 0.49
Physical Activity	1	4	1.90 ± 0.59
Total score	52	208	121.52 ± 19.35

Table 3 – Health promoting behavior among nursing students related to health responsibility

Item	Mean	SD
3. I report any unusual signs or symptoms to a physician or other health Professional	2.27	2.27
9. I read or watch TV programs about improving health	0.84	0.84
15. I question health professionals in order to understand their instructions	2.14	2.14
21. I get a second opinion when I question my health care provider's advice	0.79	0.79
27. I discuss my health concerns with health professionals	2.18	2.18
33. I inspect my body at least monthly for physical changes/danger signs	0.87	0.87
39. I ask for information from health professionals about how to take good care of myself.	2.18	2.18
45. I attend educational programs on personal health care	0.73	0.73
51. I seek guidance or counselling when necessary	2.16	2.16

Table 4 – Health promoting behavior among nursing students related to physical activity

Item	Mean	SD
4. I follow a planned exercise program	1.81	0.83
10. I exercise vigorously for 20 or more minutes at least three times a week (such as brisk walking, bicycling, aerobic dancing, using a stair climber).	2.00	0.90
16. I take part in light to moderate physical activity (such as sustained walking 30-40 minutes 5 or more times a week)	2.13	0.87
22. I take part in leisure-time (recreational) physical activities (such as swimming, dancing, bicycling).	1.73	0.81
28. I do stretching exercises at least 3 times per week	1.64	0.78
34. I get exercise during usual daily activities (such as walking during lunch, using stairs instead of elevators, parting car away from destination and walking).	2.17	0.89
40. I check my pulse rate when exercising	1.85	0.88
46. I reach my target heart rate when exercising	1.91	0.81

Table 5 – Health promoting behavior among nursing students related to nutrition

Item	Mean	SD
2. I choose a diet low in fat, saturate fat, and cholesterol	2.14	0.81
8. I limit use of sugars and food containing sugar (sweets).	2.46	0.81
14. I eat 6-11 servings of bread, cereal, rice and pasta each day	2.22	0.90
20. I eat 2-4 servings of fruit each day	1.95	0.71
26. I eat 3-5 servings of vegetables each day	2.21	0.81
32. I eat 2-3 servings of milk, yogurt or cheese each day	2.41	0.87
38. I eat only 2-3 servings from the meat, poultry, fish, dried beans, eggs, and nuts group each day	2.46	0.81
44. I read labels to identify nutrients, fats, sodium content in packaged Food	2.10	0.91
50. I eat breakfast	2.80	0.93

Table 6 – Health promoting behavior among nursing students related to spiritual growth

Item	Mean	SD
6. I feel I am growing and changing in positive ways	2.57	0.82
12. I believe that my life has purpose.	3.01	0.81
18. I look forward to the future	3.06	0.82
24. I feel content and at peace with myself	2.90	0.83
30. I work toward long-term goals in my life	2.52	0.89
36. I find each day interesting and challenging	2.47	0.76
42. I am aware of what is important to me in life	2.81	0.82
48. I feel connected with some force greater than myself.	2.28	0.90
52. I expose myself to new experiences and challenges.	2.31	0.81

Table 7 – Health promoting behavior among nursing students related to interpersonal relations

Item	Mean	SD
1. I discuss my problems and concerns with people close to me	2.18	0.74
7. I praise other people easily for their achievements	3.17	0.76
13. I maintain meaningful and fulfilling relationships with others	3.10	0.77
19. I spend time with close friends	2.54	0.82
25. I find it easy to show concern, love and warmth to others	2.87	0.83
31. I touch and am touched by people I care about	2.48	0.79
37. I find ways to meet my social needs	2.28	0.79
43. get support from a network of caring people	2.24	0.78
49. I settle conflicts with other through discussion and compromise	2.50	0.81

Table 8 – Health promoting behavior among nursing students related to stress management

Item	Mean	SD
5. I get enough sleep	2.48	0.85
11. I take some time for relaxation each day	2.57	0.87
17. I accept those things in my life which I cannot change	2.45	0.77
23. I concentrate on pleasant thoughts at bedtime.	2.45	0.82
29. I use specific methods to control my stress	2.23	0.79
35. I balance time between work and play	2.39	0.86
41. I practice relaxation or mediation for 15-20 minutes daily	2.08	0.87
47. I pace myself to prevent tiredness	2.34	0.76

Table 9 – Summary of health promoting behavior domains

Domain	Min. score	Max. score	Mean ± SD
Spiritual Growth	1	4	2.65± 0.50
Interpersonal Relations	1	4	2.59± 0.44
Stress Management	1	4	2.37± 0.45
Nutrition	1	4	2.30± 0.41
Health Responsibility	1	4	2.13± 0.49
Physical activity	1	4	1.90± 0.59
Total score	**52**	**208**	**121.52± 19.35**

Results showed that there is no significant difference in the mean score of participants' health promoting behavior between male and females ($p>0.05$). In addition, there is no significant difference in the mean score of participants' health promoting behavior between different marital status of participants ($p>0.05$). Furthermore, there is no significant difference in the mean score of participants' health promoting behavior between different age groups of participants ($p>0.05$). Moreover, there is no significant difference in the mean score of participants' health promoting behavior between different income groups of participants (Table 10).

Table 10 – Factors affecting health promoting behaviors

Descriptive	N	Mean	SD	t-statistics	p-value [a]
Gender					
Male	101	2.3309	.33868	-0.179 (725)	0.858 [a]
Female	626	2.3381	.37762		
Marital status					
Single	157	2.3623	.39836	2.280 (3, 723)	0.078 [b]
Married	518	2.3284	.36222		
Divorced	39	2.4191	.40976		
Widowed	13	2.1331	.23961		
Age groups					
25 years or below	126	2.3741	.38314	2.399 (3, 723)	0.067 [b]
26-35 years	203	2.3782	.40596		
36-45 years	243	2.2953	.37500		
More than 45 years	155	2.3186	.30082		
Income					
Below 5000 SAR	180	2.3603	.38907	1.42 (2, 724)	0.215 [b]
5000- below 10000	246	2.3036	.37101		
10000 and more	301	2.3506	.36217		

a Independent Sample t test, b One-Way ANOVA

The results also showed that there is no significant difference in the mean score of participants' health promoting behavior with regard to smoking status ($p>0.05$). In addition, there is no significant difference in the mean score of participants' health promoting behavior between different levels of study of participants ($p>0.05$). On the other hand, there is a significant difference in the mean score of participants' health promoting behavior between those who have health insurance and those who do not ($p<0.05$). Participants who have health insurance have significantly higher level (2.39) of health promoting behavior than those who do not (Table 11).

Table 11 – Other factors affecting health promoting behaviors

Emotional intelligence	N	Mean	SD	F/t statistics	p value
Health insurance					
No	568	2.3207	.36481	-2.250 (725)	0.025 [a]
Yes	159	2.3956	.39330		
Smoker					
No	684	2.3383	.37423	0.347 (725)	0.729 [a]
Yes	43	2.3180	.34263		
Study level					
First	53	2.3041	.39178	1.203 (3, 723)	0.308 [b]
Second	58	2.2928	.41778		
Third	169	2.3798	.39505		
Fourth	447	2.3306	.35418		

a Independent Sample t test, b One-Way ANOVA

Discussion

This study assessed student health promoting behaviors among nursing students in Saudi Arabia. Such studies are lacking in Saudi Arabia mainly which that focus on nursing students. Many chronic illnesses, such as ischemic heart disease and diabetes mellitus, have been linked to harmful lifestyle habits, such as insufficient amounts of physical activity and poor dietary choices. The level of health promoting behavior in the present study is 121.52, this indicated that students had a moderate level of health promotion. Previous research, like that done by Maheri et al. in 2020, has shown that similar findings are obtained. This might be because of the fact that they train at different times of the day, sometimes in the morning and other times in the evening, and hence have less control over their schedules.

The overall level of health promoting behavior among nursing students had a score of 138.57 according to a research that was conducted by Fashafsheh et al. (2021), which demonstrated that the level of health promoting behavior among nursing students was lower than what was found in the current study. In a research that found health promoting behavior among nursing students was rated as 4.70 out of 5, the score for health promoting behavior came in lower than the mean score of all health promoting behaviors combined.

This result was consistent with a finding from a previous research (Montazeri et al., 2017), which found that the participants in this study achieved somewhat higher ratings for spiritual growth (2.65). This is congruent with the findings of a research conducted by Fashafsheh et al. (2021), which indicated that physical activity had the lowest subscale and spiritual growth had the greatest one. Physical activity had the lowest score among the health promoting behavior category, while spiritual growth had the highest mean.

This finding was consistent with the findings of earlier research (Montazeri et al., 2017), which found that the scores on the physical activity subscale were the lowest. The present study indicated that these scores were 19.97 5.33. This conclusion may be explained by looking at the social and cultural environment in which it occurred, namely the fact that behaviors associated with regular exercise are still not fully integrated into everyday life as activities done for leisure. In addition, getting access to community sports centers that charge fees to use their facilities might be difficult. One such possibility is that our student nurses have to participate in both classroom instruction and clinical rotations, so the physical activity they do may leave them feeling exhausted.

In spite of this, more in-depth planning was required in some areas so that the situation could be improved and the circumstances that were intended could be realized. According to the findings of research conducted by Emami et al. (2015), it was determined that the mean score of health-promoting habits was moderate. One of the factors that contributed to the relative discrepancy of these previous research with this one was the participants who were investigated. The fact that all children from a single field and of varying grade levels participated in the present research may help to explain the differences in the results. In a research conducted by Fashafsheh et al. (2021) and Bastani et al. (2018), which demonstrated a significant connection with age and gender, inconsistencies in the findings were observed. Another research by Ghanim et al. (2021) came to a different conclusion; they found that gender differences in the whole health-promoting lifestyle profile and health responsibility were significant. This finding was contradicted by the first finding.

In the present study, all of factors mentioned in the questionnaire were not associated with health promoting behavior among nursing students such as gender, age, level of study, income, marital status, smoking. On the other hand, health insurance was considered as a significant factor with higher among students who have health insurance. This could be attributed to the fact that people with health insurance can attend regular examination in primary healthcare centers and hospitals, and they can get the needed items and food for healthy lifestyle, while those who do not have health insurance might not engage in such healthy activities and regular exam procedures.

Conclusion

Students' health promoting behaviors and lifestyle test scores were in a moderate range. This research demonstrates that having health insurance has a significant impact on the health-promoting behaviors of nursing students. In order to assist university administrators and personnel in the development of strategies that are more efficient in fostering health-promoting habits among nursing students, the research offers recommendations.

Recommendations

It is necessary to implement educational programs that are both interventional and standardized in order to modify the lifestyle of students and encourage healthy behaviors in areas such as exercise and wellness, spiritual health, weight management, and nutrition in residential college settings and university settings more generally. The idea of promoting healthy behavior should be included into the course material that is taught at nursing schools and colleges. The health insurance disparities in health promoting behaviors imply that decision-makers should give more attention to the adoption of suitable intervention strategies for

each student. This is because the decision-makers should provide more weight to the adoption of appropriate intervention methods for each student.

It is imperative that further research be conducted if we are to get a deeper understanding of the health promoting behaviors of nursing students as future nurses, particularly during their first few weeks at the university. It is possible that nursing students' participation in the construction of public educational lectures for their fellow workers and the community may raise their understanding about their obligations as future healthcare professionals and increase their awareness of healthy habits.

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