Effectiveness of an Educational Program Using the Health Beliefs Model to Change Health Beliefs About Smoking Among University Students

فعالية برنامج تعليمي باستخدام نموذج المعتقدات الصحية لتغيير المعتقدات الصحية حول التدخين للطلبة الجامعيين

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الخلاصة:

خلفية البحث: اضطرابا ت سوء استخدام المواد المخدرة هو مصدر قلق صحي كبير في جميع أنحاء العالم. استخدام المواد المخدرة مشكلة كبيرة التي ترتبط بالمرضية والوفيات بشكل كبير. ومع ذلك، ترتبط مشاكل استخدام الموا د المخدرة مع التدرج الرجعي للصحة والضعف والموت بسبب التأثيرات والتجاوزات. وهناك قلق متزايد بشأن آثار الصراعات والازمات على استخدام الموا د المخدرة في العراق.

الأهداف: تحديد فعالية التدخل القائم على نموذج المعتقدات الصحية في تغيير الاعتقاد المتعلق بتعاطي الموا د المخدرة بين طلبة الكليات. وتحديد العلاقة بين مكونات نموذج المعتقدات الصحية المتمثلة في القابلية المتصورة، والشدة المتصورة، والفوائد المتصورة، والحواجز المتصورة، والإشارات إلى العمل، والفعالية الذاتية، في سلوك المشاركين في الوقاية من الإدمان.

المنهجية: عينة الدراسة شملت 100 طالبا شاركوا في البرنامج التدريبي لتغير السلوك. عينة الدراسة تم توظيفها من خمس كليات في جامعة القادسية. تضمن التداخل للمجموعة التجريبية مشاركتهم في محاضرة تثقيف صحي حول استخدام المواد المخدرة. تم استخدام "الحزمة الاحصائية للعلوم الاجتماعية" الاصدار (26) من خلال الاحصاءات الوصفية والاحصاءات الاستنتاجية واستعمال اختبار الانوفا.

النتائج: من خلال النتائج تبين أنه توجد اختلافات ذات دلالة إحصائية بين جميع مفاهيم نموذج الاعتقاد الصحي المتعلقة باستخدام الموا د المخدرة. ماعدا العوائق المدركة هو الاعتقاد الوحيد الذي لم يظهر أي تغييرا ت كبيرة مع مرور الوقت.

الاستنتاجات: وقد خلصت هذه الدراسة إلى أن التدخل الصحي من خلال نموذج المعتقدات الصحية يوضح أهمية تجنب استعمال المواد المخدرة وتبين ان لهُ تَأثِيراً إِيجَابِياً عَلىَ معتقدات آلطَلَبَةِ آلصِحِيَةِ. واوصت آلدِرِاسَةِ بضرورة إجراء دراسات مستقبلية تستند إلى نموذج المعتقدات الصحية على عدد كبير من فئات المجتمع العراقي بهدف تغيير سلوك الناس اتجاه الإدمان.

مفتاح الكلمات: تعاطي المواد المخدرة، الادمان، الطلبة الجامعيين، نموذج المعتقدات الصحية

Abstract:

Background: Around the world, tobacco, shisha disorders are a serious health concern. Substance abuse is a serious issue that is linked to high rates of morbidity and death. However, because of their effects and abuses, tobacco, shisha disorders are linked to a regressive progression of health, disability, and death. Concern over how conflicts and crises affect substance usage in Iraq is growing.

Objectives: To ascertain whether a health beliefs model-based intervention can influence college students' attitudes on tobacco, shisha. Additionally, to ascertain how participants' behavior in addiction prevention is influenced by the elements of the Health Beliefs Model, self-confidence, perceived fragility perceived danger, perceived advantages, perceived challenges and impulses to take action.

Methodology: One hundred students who took part in the behavior change training program made up the study sample. Al-Qadisiyah University's five colleges provided the study sample. Participation in a drug use health education lecture was part of the experimental group's intervention. Descriptive statistics, inferential statistics, and the ANOVA test were employed in the Statistical Social Sciences Package (SPSS) version (26).

Results: The findings demonstrated that all of the health belief model's ideas pertaining to drug use differ statistically significantly. The sole notion that did not exhibit any discernible shifts over time was perceived barriers.

Conclusions: This study found that using the health beliefs model to guide health interventions helps students understand the value of abstaining from drug use and improves their perceptions of their own health. In order to change people's behavior toward addiction, the study suggested that further research on a wide range of Iraqi social groups should be conducted using the health beliefs model.

Key words: university students, tobacco, shisha, addiction, and health ideas.

1. Introduction:

Tobacco and shisha are a significant global health issue. Tobacco and shisha are an inherent issue linked to significant levels of illness and death. These disorders are also accountable for significant healthcare occupation and medical expenses [(1)]. Tobacco and shisha and self-control issues are prevalent across all populations. A public health issue with substantial social and economic implications [(2)]. Multiple clinical investigations indicate a correlation Amidst substance misuse and personality disorders with proper guidance Personality pathology can have an impact on both the cause and progression of sickness. Issues related to the misuse of substances [(3)].

Tobacco and shisha problems are linked to taking advantage of old health Graduation, weakness, and death as a result of collisions and overtaking [(4)]. There is a growing apprehension regarding the impact of conflicts and wars on tobacco and shisha in Iraq [(5)]. It has been shown that drug abuse can have an impact on society regulations serve not only as a health concern but also as a social issue. Added to this is addiction to other opioids, as well as health problems, as well as social problems disadvantage [(6)].

Students are among the groups that experience a high risk of tobacco and shisha due to They don't know the consequences of illegal drug but they don't have valid convictions about them [(7)]. Tobacco, shisha," Global warming is a significant problem in the contemporary world. Factors contributing to tobacco and shisha: Severe and consequential ailments, such as health issues, incapacity, and failure to fulfill duties in professional, educational, domestic, and academic settings [(8)].

Tobacco and shisha by individuals in their early adulthood. A 2010 survey revealed that the use of "high-risk" medications resulted in around 27 million cases of psychological and social disorders, which posed a significant threat to individuals' overall well-being and health. In 2015, over 300,000 individuals were classified as victims of tobacco and shisha disorders [(9)]. Regarding

tobacco and shisha disorders, current information indicates that over 85% of individuals who fulfill the criteria for such disorders experience them during adulthood.

the criteria for using substances do so early in life. In contrast to puberty which adolescents have moved on without meeting the demands of problematic tobacco and shisha, one is unlikely to grow up at all [(10)].

Nevertheless, college preparation has traditionally been regarded as a protective measure against the emergence of tobacco and shisha issues in young individuals. Over the course of several decades, tobacco and shisha has emerged as a highly prevalent health issue at a university in the United States [(11)]. According to a study conducted in the United States on the correlation between medicine and criminality in 2013, the number of individuals who consumed alcohol fell within the range of 155 to 250 million. Approximately 5.3% to 7.5% of individuals aged 15 to 65 years, totaling persons, fall into this category [(12)]. It is anticipated that the incidence of tobacco and shisha would rise as time progresses. Genetic variables that have a role in the development of tobacco and shisha that are engaged in regulating many neurobiological systems, including as dopamine and glutamatergic systems, have been identified as significant [(13)]. In 2017, the substance was responsible for almost 70.000 fatalities. The number of deaths resulting from overdoses is not equivalent to the number of deaths caused by HIV, violence, or traffic accidents. The number of accidents has reached its highest point, with a total of incidents [(14)].

Smoking is the leading cause of death in the United States and worldwide. The 2014 Surgeon General's Statement on Health highlighted the significant success made in reducing smoking rates over the past 50 years. However, it also revealed that smoking remains prevalent among young people. The analysis affirms the need to persistently monitor the various forms of tobacco product usage, particularly the growing discrepancy in usage patterns and the increasing prevalence of alternative smoking methods in advertising targeted at young individuals [(15)]. The prevalence of

smoking among high school and university students in Iraqi studies varied between 3.2% and 21% [16].

However, according to the World Health Organization (WHO), a record high (3.3 million) deaths worldwide due to tobacco and shisha in 2012 [17]. Determined this statement to be unintentional Injuries accounted for the second-largest portion of tobacco and shisha deaths after cardiovascular disease, and that such a large number of tobacco and shisha deaths and injuries in the world is a matter of concern. It occurs in developing countries The predominant age bracket for tobacco and shisha worldwide falls between the range of 18 to 25 years. Some students at these ages use tobacco and shisha, and there has been an increase in tobacco and shisha, with tobacco and shisha (3.8%) being the most common tobacco and shisha in the world [18].

1.2. Substance use in Iraqi society

The tobacco and shisha is particularly widespread among young people They are always in high school and college students [19]. Therefore, the distribution of lifetime uses of tobacco and shisha in Iraq was at least 10.3 percent. According to the reports of the Iraqi Ministry of Health for the year 2017, the number of smokers in Iraq was (31%) males, (4 %) females on the other hand On the other hand, according to statistics [20].

University students aged (18-24) for the period of accelerated economic study, The social and cultural transition in Iraq that produced an occasion A condition for the growth of types of social disorder such as smoking, hookah. Tobacco and shisha is increasing problems in Iraq, as is the case in many countries Developing countries. The number of college students in Iraq is very large The group most vulnerable to drug dependence. This is very serious A problem that worries the people and the government [21]. Addiction among youth in Iraq is linked to public health Problems such as poverty and absenteeism from school. The latest study in Iraq found that (41.7%) of students are smokers, and this allows for bad things

Explaining that smoking is an admission of smoking by others, which in turn can destroy young people's lives the brain Effects [(22)].

1.3. the importance of studying

Tobacco and shisha are the main concern of the contemporary world is considered a popular issue Mortality worldwide [(23)]. A university campus is a typical place to start studying use of tobacco and shisha. The student is far from the father's watchful eyes the mom. They are youthful and eager to experiment with anything contemporary. They are experiencing peer pressure to conform to the behavior of their classmates. Student pursuing a bachelor's degree During the time of life when individuals begin to make independent decisions, the main focus is on the student in the chosen topic of study to be pursued by the researcher, with the aim of addressing and mitigating the population's issues [(24)].

The study's findings are anticipated to assist students in formulating health policies that challenge prevailing attitudes about Tobacco and shisha. Utilizing it to mitigate addiction and curb its proliferation among college students. There is a lack of comprehensive research and publications that specifically address Tobacco and shisha among university students, resulting in a limited understanding of the extent of the issue. The user residing in the city of Al-Qadisiyah contributes to the requirements of the students and the understanding of the community. The present investigation is driven by many elements associated with addiction issues and their influence on individuals. This study aims to assess the present prevalence of tobacco and shisha addiction among college students and examine their awareness of preventive actions to mitigate this issue. The prevalence of drug use among this population contributes to the formation of their health beliefs. A conceptual framework for understanding the process of altering beliefs and attitudes toward tobacco and shisha, with the aim of preserving the integrity of universities. As a complimentary resource.

1.4. Objectives of the study

1 .Describe demographic characteristics, behavioral habits and sex, Academic, social and economic status of university students.

2.To assess the effectiveness of the health beliefs model Intervention targeting the modification of ideas associated with Tobacco and shisha among college students at Al-Qadisiyah University.

3. The relationship between the components of the health belief model can be identified as follows: perceived sensitivity, perceived severity, perceived advantages, perceived barriers, cues to action, and self-efficacy. Furthermore, the study examines the impact of motivation, perceived behavioral control, intention, and behavior on participants' engagement in addiction prevention.

1.5. Definitions of Terms

The following words are defined in the study's order, both theoretically and practically:

1 .Effetiveness

a. Theoretical definition

The definition of competency is the ability to perform a task satisfactorily or to the expected degree [25].

b. Operational definition

It is the ability to predict the extent to which students' behaviors and beliefs will change in the direction of tobacco and shisha.

2.The perceived susceptibility

A theoretical definition refers to a precise and concise explanation of a concept or idea based on theoretical principles and concepts.

Perceived approachability is influenced by an individual's level of familiarity with the topic. The potentiality of encountering an illness that can adversely affect one's well-being. Individuals should identify those who are susceptible based on their contemporary behavioral patterns [25].

b. An operational definition

Perceived sensitivity is measured by the participant's response to the item from the health belief model. It has been weighted according to usage students' beliefs toward tobacco and shisha. Responses are measured Five-point Likert scale, ranging from "strongly disagree" to five points "Strongly Agree". Responses to items of perceived sensitivity are These are summed to arrive at an aggregated signal score for the perceiver level Portability. A high level of perceived sensitivity represents high The result is that a low level of perceived sensitivity is considered low Result.

3 .Perceived seriousness.

a. Theoretical definition

It indicates an understanding of the health problem and the seriousness of the disease A disease that affects a person if he does not take preventive measures [(26)].

b. Operational definition

Perceived seriousness is measured by the participant's response to the item from the health belief model. It was measured using Students' beliefs toward tobacco and shisha. Responses are measured Five-point Likert scale, ranging from "strongly disagree" to five points" Strongly Agree". Responses to items of perceived seriousness are These are summed to arrive at an aggregated signal score for the perceiver level danger. A high level of perceived seriousness represents high The result is that a low level of perceived seriousness is considered low result.

4. Perceived advantages

a. Definition in theory

It pertains to an individual's perceptions of the efficacy or success of something. There are multiple methods available to decrease the likelihood of contracting an illness [(27)].

b. An operational definition

refers to a clear and specific description of how a concept or variable will be measured or observed in a study. The perceived advantages are assessed based on the participant's

reaction to items of the health belief model. Quantified based on utilization Students' attitudes toward tobacco and shisha. The responses are assessed using a Five-point Likert scale, which spans from "strongly disagree" to "strongly agree" with five points. The responses to the perceived advantages items are being evaluated. The individual scores are used to generate an overall signal score for the benefits at the perceiver level. A strong perception of benefits corresponds to favorable results. A low degree of perceived benefits is regarded as a low result.

5 .Perceived barriers

a. Theoretical definition

Perceived barriers are people's beliefs about obstacles they will face while practicing modern behavior or adaptation Modern lifestyle [(27)].

b. Operational definition

Perceived barriers are measured by the participant's response to item of the health belief model. It was measured using Students' beliefs toward tobacco and shisha. Responses are measured Five-point Likert scale, ranging from "strongly disagree" to five points "Strongly Agree". Responses to perceived barriers are: These are summed to arrive at an aggregated signal score for the perceiver levelBarriers.

A high level of perceived barriers represents high outcomes, whereas. A low level of perceived barriers is considered a low outcome.

6 .References to action

a. Theoretical definition

It is a strategy of preparation, and it may be internal or external

To provide information, raise awareness and integrate An appropriate reference system that can motivate healthy behavior[(28)].

b. Operational definition

Cues to action are measured by the participant's response to item of the health belief model. Measured by usage Students' beliefs toward tobacco and shisha. Responses are measured Five-point Likert scale, ranging from “strongly disagree” to five points "Strongly Agree". Responses to the cues-to-action items are summed Access the aggregated score signal for the level of action-perceived signals. A high level of action-perceived cues represents a high score while a low level of action-perceived cues represents a low score.

7 .Perceived self-efficacy

a. Theoretical definition

It refers to an individual's beliefs in his or her ability to perform something (perceived ability) and adapt to lifestyles [(29)].

b. Operational definition

Perceived self-efficacy is measured by the participant's response to the item from the health belief model. Measured by usage Students' beliefs toward. tobacco and shisha Responses are measured on a 5-point Likert scale, ranging from one point “strongly disagree” to five points “strongly agree.” The answers to the self-efficacy items were summed to arrive at an indication of the total score for the level of perceived self-efficacy. A high level of perceived self-efficacy represents a high outcome while a low level of perceived self-efficacy represents a low outcome.

8 .Perceived motivation

a. Theoretical definition

Perceived motivating behavior is directed toward or away from

Certain stimulants, and is also described as great activity, strength,Persistence and effort in establishing and maintaining the behavior [(30)].

b. Operational definition

Perceived motivation is measured by the participant's response to items from the health belief model and is measured using students' beliefs toward tobacco and shisha. Responses are measured on a 5-point Likert scale, ranging from one point "strongly disagree" to five points "strongly agree." Answers to the motivation items are summed to arrive at a combined score indication of the level of perceived stimulation. A high level of perceived motivation A high degree of perceived motivation is indicative of a favorable outcome, whereas a low level of perceived drive is indicative of an unfavorable outcome.

9 .Controlling perceived behavior

a. Theoretical definition

Perceived behavioral control refers to the performance of a behavior being influenced by the presence of adequate resources and the ability to control barriers to behaviors [(31)].

b. Operational definition

Perceived behavioral control is measured by the participant's response to items from the Health Belief Model. It was measured using students' beliefs toward tobacco and shisha. Responses are measured on a 5-point Likert scale, ranging from one point "strongly disagree" to five points "strongly agree." Responses to the behavioral control items are summed to arrive at a combined score indication for the level of perceived behavioral control. A high level of perceived behavioral control represents a high outcome while a low level of perceived behavioral control represents a low outcome.

10 .Behavioral intentions

a. Theoretical definition

Behavioral intentions pertain to an individual's perception of the probability of adopting a new behavior [(32)].

b. Operational definition

Intention is assessed based on the participant's reaction to four items derived from the Health Belief Model. The measurement was performed by evaluating students' attitudes towards Tobacco and shisha. The replies are evaluated using a 5-point Likert scale, ranging from "strongly disagree" (1 point) to "strongly agree" (5 points). The responses to the intention elements are added together to obtain a composite score that indicates the level of intention. According to a strong level of intention is associated with a positive outcome, whereas a weak level of intention is associated with a negative outcome.

11 . Tobacco and Shisha utilization

a. An Theoretical definition

Tobacco and shisha refer to the detrimental utilization of any substance with the intention of affecting one's mood. compounds may encompass, tobacco and shisha [(33)].

b. Operational definition

A person's use of harmful substances, such as smoking, shisha, causing addiction in the future.

2. Methodology: 2.1. Study Design: True experimental design, using randomized controlled trial, approach was implemented to assess the efficacy of the health beliefs model in altering the health beliefs of undergraduate students regarding drug use at Al-Qadisiyah University.

2.2. Ethical Considerations: Participants in the study completed a consent form indicating their agreement to partake, acknowledging that participation was optional and that their information would be kept confidential and utilized solely for research reasons.

2.3 .Administrative Arrangements: The researcher secured authorization from the University of Baghdad's College of Nursing's specialty is Community Health Nursing. The endorsement from the Iraqi Ministry of Planning; Central Statistical Organization was secured. The University of Baghdad's College of Nursing granted approval for all colleges at the University of Al-Qadisiyah. The

Research Ethics Committee at the College of Nursing, University of Baghdad, granted approval.

2.4 .Study Setting : The research is conducted at the University of Al-Qadisiyah, a public institution situated in Al-Qadisiyah. It is one of the largest educational and research institutions in Al-Qadisiyah Governorate. It comprises 18 colleges in several disciplines across five colleges of the University of Al-Qadisiyah by lottery: Archaeology, Arts, Computer Science, Information Technology, Management, Economics, and Education. The university's facilities are situated across multiple sites, with the primary location in the northern part of Diwaniyah, adjacent to the Al-Zawraa district.

2.5. Development of an Education Program

An education program was designed based on the outcomes of the kids' needs assessment utilizing the Health Beliefs Model to alter beliefs concerning substance misuse. Pre-testing and validity are carried out before the education program is put into action. The program has three primary sessions. Each session is structured and allocated a minimum duration of 90 minutes, focusing on altering the health perceptions of college students around to bacco and shisha. All sessions are conducted in the classroom at Al-Qadisiyah University. The health intervention program will be implemented.

Each session is structured and has a duration of around ninety minutes. The agenda for each session has the following elements:

Session subject.

b. Educational Objectives

c. Content d. Assessment of each session (annotations).

Audio-visual resources encompass a PowerPoint presentation, posters, movies, and audience response debates among undergraduate students during each session.

ObSession One: Overview of tobacco and shisha

1 .Subject Matter:

A. Overview of tobacco and shisha B. Terminology of tobacco and shisha

C. Categories of tobacco and shisha

D. Etiology of tobacco and shisha

2 .Session Objectives: Identification of tobacco and shisha, their classifications, and the etiologies of addiction

3 .Educational methodologies: Lecture, discourse, presentation, and visual aids

5. Session venue: A classroom at Al-Qadisiyah University.

Session Two:

Implementation of the Health Belief Model

1. Content Utilizing six constructs of the Health Belief Model: "perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy".

2.Session Objectives: Altering health perceptions around tobacco and shisha among university students in at Al-Qadisiyah University.

3 .Educational methodologies: Lecture, discourse, presentation, and visual aids.

5. Session venue: A classroom at Al-Qadisiyah University.

Session Three:

Mitigation of Tobacco and Shisha Risks

1 .Content

A. Primary Phases of Overcoming Addiction.

B. Tobacco and Shisha Prevention.

C. Empowering Students and Augmenting Their Self-Confidence.

2 .Session Objectives: Identifying Protocols and Strategies for Mitigating Tobacco and Shisha.

3.Educational Resources: Lectures, Discussions, Presentations, and Illustrations.

5. Session Venue: Classroom at Al-Qadisiyah University.

2.6. Instrument of the Study : The present study included a deveioped self-report questionnaire. The questionnaire comprises two sections: the first section addresses the sociodemographic attributes of college students, including age, gender, grade, college, and socioeconomic level, while the second section focuses on health views around tobocco and shisha . This instrument was derived from multiple sources.

3. Results: Section One: Health Belief Model and tobocco and shisha (Fundamental Sample Characteristics and Group Homogeneity).

Table 3.1: Demographic Attributes and Uniformity Between Trial and the control group.

Socio-demographic	Exp. (num.=50)		Con. (num.=50)		Total (num.=100)		t
	m.	Sd.	m.	Sd.	m.	Sd.	
Gender	21.92	2.22	21.76	2.30	21.84	2.25	0.314
BMI	21.90	1.86	21.82	21.90	21.86	1.87	0.325
Characteristics	F	%	F	%	F	%	χ^2
Age (18-21)	18	36	21	42	39	39	
Age (22-25)	32	64	29	58	61	61	
Sex							0.157
Male	41	82	42	84	83	83	
Female	9	18	8	16	17	17	
Marital Status							0.199
Single	36	72	28	56	64	64	
Marrid	12	24	19	38	31	31	
Divorced	2	4	3	6	5	4	
House							0.157
Owner	34	68	37	74	71	71	
Rent	16	32	13	26	29	29	

Table 3.2: Spread and uniformity of behaviours among con. and exp. populations.

Behavioral habits	Exp. (num.=50)		Con. (num.=50)		T (num.=100)		χ^2
	F	%	F	%	F	%	
Smoking	29		29		58		0.157
Currently	24	82.8	19	65.5	43	74.13	
Intermittent	5	17.2	10	34.5	15	25.87	
Hookah	21		21		42		
Currently	16	76.20	13	61.90	29	69.05	0.504
Intermittent	5	23.80	8	38.10	13	30.29	

Table 3.4: Classification of socio-economic strata to Kup. scale.

Class	T.S.	Exp. (num.=50)		Con. (nnm.=50)		T (num.=100)	
		F	%	F	%	F	%
Upper	26-29	10	20	5	10	15	15
Upper Middle	16-25	7	14	10	20	17	17
Lower Middle	11-15	9	18	6	12	15	15
Upper Lower	5-10	17	34	23	46	40	40
lower	Less than 5	**7**	14	6	12	13	13
χ^2 **= 0.259**							

Section Two: Assessing the Effictive of the H B M in Modifying Belief Pertaining tobocco and shisha:

Table 3.5: Fundamental Uniformity in the health beliefs model regarding concepts, motivations, behaviour modification, among the exp. and con. group.

HBM	G.					
	Exp. (n=50)		Con. (n=50)			
	"m."	S.d.	"m."	S.d.	t.	p.
P. Prep.	2.42	(0.63)	2.30	(0.60)	0.975	0.332
Per. S.	3.06	(1.01)	3.13	(0.98)	-0.352	0.726
Per.Ben.	2.89	(0.70)	2.97	(0.96)	-0.476	0.635
Per.Bar.	2.72	(0.68)	2.91	(0.61)	-1.471	0.145
Ref. Act.	2.40	(0.66)	2.18	(0.57)	1.784	0.078
S. effi.	2.20	(0.72)	2.48	(0.63)	-2.069	0.041

Table 3.6: Desscriptive stattistics assessing alterations in h b m constructs, mottivation, behaviorals con., and behaviuoral intentions among research groups and time.

HBMs	G.	m. (sd.)					
		Pr.-test		Po.-test 1		Po.-test 2	
Per.Pre.	Exp.	2.42	(0.63)	3.61	(0.50)	3.52	(0.51)
	Con.	2.30	(0.60)	2.45	(0.62)	2.54	(0.81)
Per. Severity	Exp	3.06	(1.01)	3.67	(0.77)	3.65	(0.77)
	Con	3.13	(0.98)	3.28	(1.11)	3.25	(1.11)
Perceived Benefits	Exp	2.89	(0.70)	3.74	(0.41)	3.69	(0.41)
	Con	2.97	(0.96)	3.28	(0.58)	3.26	(0.55)
Perceived Barriers	Exp	2.72	(0.68)	2.64	(0.68)	2.60	(0.64)
	Con	2.91	(0.61)	2.95	(0.65)	2.90	(0.59)
Refer to action	Exp	2.40	(0.66)	3.19	(0.66)	3.26	(0.74)
	Con	2.18	(0.57)	2.29	(0.55)	2.37	(0.58)
Self efficacy	"Exp"	"2.20"	"0.72"	"3.3"	"0.8"	"3.4"	"0.8"
	"Con"	"2.48"	"0.63"	"2.7"	"0.4"	"2.7"	"0.4"

Table (3:7): Scores for the range, weighted mean, and rank scores pertaining to changes in the h. B. M. conccepts, motiveation, behavioural con., and behavioural intents within the exp. Groups.

HBMs	S. R.	Weighted Mean			Rank
		Pr.-test	Po.-test1	Po.-test 2	
Perceived Preparedness	(1-5)	2.42	3.61	3.52	4
Perceived Severity	(1-5)	3.06	3.67	3.65	2
Perceived Benefits	(1-5)	2.89	3.74	3.69	1
Perceived Barriers	(1-5)	2.72	2.64	2.60	3
Refer to action	(1-5)	2.40	3.19	3.26	6
Self-efficacy	(1-5)	2.20	3.33	3.49	5

Table 3.8: One-way ANOVA examining the h. B. M. for alterations in tobacco and shisha

ANOVA						
		s.s.	d.f.	m.s.	f.	Sig.
perceived Preparedness	B. Gro.s	87.787	5	17.557	45.108	0.000
	Within Groups	114.432	294			
	Total	0.389	299			
Perceived Severity	B. Gro.s	17.180	5	3.436	3.629	0.03
	Within Groups	278.404	294	0.947		
	Total	295.584	299			
Perceived Benefits	B. Gro.s	31.264	5	6.253	19.131	0.000
	Within Groups	96.090	294	0.327		
	Total	127.354	299			
Perceived Barriers	B. Gro.s	5.775	5	1.155	2.766	0.018
	Within Groups	122.758	294	0. .418		
	Total	128.534	299			
Refer to action	B. Gro.s	57.387	5	11.477	28.392	0.000
	Within Groups	118.849	294	0. 404		
	Total	176.236	299			
Self-efficacy	B. Gro.s	46.108	5	9.222	20.907	0.000
	Within Groups	129.675	294	0. 441		
	Total	175.783	299			

Section Three: Analyzing the interconnections among the h. b. m., behevioral motives, behevioral con., to alter tobacco and shisha beliefs of research participants and control groups:

Table 3.9 displays the Pearson correlation coefficients among tobacco and shisha belief, motivation, behavioral controls, throughout three intervals (pre.test, pos.test 1, and pos.test 2) experimental.

Variable		1	2	3	4	5
Baseline test (T0)	1.PP					
	2.PS	0.747**				
	3.Ben.	0.458**	0.126			
	4.Barriers	0.406**	0.163	0.965**		
	5.RA	0.727**	0.507**	0.279*	0.238	
	6.S.E.	0.628**	0.382**	0.172	0.154	0.871**
Post-test 1 (T1)	1.PP					
	2.PS	0.200				
	3.Ben.	0.427**	-0.018			
	4.Barriers	0.234	0.207	0.747**		
	5.RA	0.171	0.154	0.421**	0.533**	
	6.S.E.	0.096	-0.022	0.137	0.227	0.084
Post-test 2 (T2)	1.PP					
	2.PS	0.204				
	3.Ben.	0.389**	-0.046			
	4.Barriers	0.220	0.221	0.715**		
	5.RA	-0.085	0.123	0.298*	0.522**	
	6.S.E.	-0.118	-0.014	0.175	0.296*	0.300*

PP: perceived preparedness. PS: severity. RA: refer to action. M: motivation. SE: self-efficacy.

Table 3.10: Correlations among the constructs of the h. b. m., motivation, behevioral con., and intenteons utilize substances within the control grou. particepants (num = 50):

Variable		1	2	3	4	5
Baseline test (T0)	1.PP					
	2.PS	0.686**				
	3.Ben.	0.083	-0.101			
	4.Barriers	0.431**	0.113	0.675**		
	5.RA	0.499**	0.441**	-0.58**	-0.215	
	6.S.E.	0.259	0.262	-0.124	0.303*	0.444**

Post-test 1 (T1)	1.PP					
	2.PS	0.663**				
	3.Ben.	0.210	-0.129			
	4.Barriers	0.465**	0.046	0.885**		
	5.RA	0.506**	0.508**	-0.43**	-0.191	
	6.S.E.	0.479**	0.376**	-0.103	0.144	0.753
Post-test 2 (T2)	1.PP					
	2.PS	0.760**				
	3.Ben.	0.123	-0.123			
	4.Barriers	0.371**	0.074**	0.850**		
	5.RA	0.499**	0.488**	-0.359*	-0.071	
	6.S.E.	0.452**	0.320*	-0.010	0.231	0.598**

PP: perceived preparedness. PS: perceived severity. RA: refer to action. M: motivation. SE: self-efficacy.

4.Discussion: Section one: Examination of the distribution of fundamental socio-demographic attributes of the study participants and the uniformity:

mean. age ± standard deviation the study group was (23.37 ± 2.09), while that of the control group was (21.84 ± 2.25). The data indicated that most individuals had a normal weight, with a mean total body mass index of 21.86 ± 1.87. The bulk of participants were male (83%) and homeowners (71%). Concerning marital status, the majority of individuals were single.(%64)

This study's findings align with study [5], which indicated that mal. particepants exhibited a markedly hegher prevelence of tobacco and shisha, compered to femeles. This study parallels study [16], which determined that the averege agee of pupils .(2.90 ± 21.21)

Approximately 97.9% were unmarried, 72.9% had modest familial incuome, 81.3% resided in a homeowner's residence. This study aligns with study [20], which determined averege agee of the examined populetion (23.48 ± 2.51). 56.6% of parents possessed a low level of education.

The survey indicated that the majority of participants were smokers users (58%), and hookah (42%). Consistent with this study [14], adolescent smoking was a significant predictor of persistent smoking behaviours (57%). This study concurs with [25], which

determined that the m. age examined populetion was (23.48 ± 2.51). 56.6% of the parents possessed a low level of education.

This data aligns with the 2017 survey conducted in Baghdad, which reported a lifetime prevalence of alcohol usage at 17.8% and drug use at 7.02%. The rise consumption of tobacco and shisha, prescreption pharmaceuticals, and illicet drogs signify escalation in substence abuse disordars nationwide, hence necessitating enhanced treatment efforts.

The study's results indicated that the sample was homogeneous, as the implementation of randomised experiments necessitates homogeneity. Consequently, randomised experiments are deemed the optimal method for assessing the efficacy of addressing a specific issue through the application of the Health Belief Model (HBM). Thus, the outcomes both exp. and con. greoups homogeneous.

Furthermore, predominant proportion participants in both the experimental and control groups belonged to the lower upper class regarding family income, as per the Kuppuswamy scale, around (34%) and (46%), respectively .

The analysis of these results indicates that individuals with restricted family finances and parents lacking advanced education are more prone to addiction and drug use in this context. The cause is insufficient personal education, coupled with inadequate familial education or family dissolution. tobacco and shisha addiction, influenced by factors such as parental education and low family income, is greatly impacted by the socio-economic level (SES) of students. This finding aligns with study [29], which indicated that the grandchildren of individuals from families without a college degree were more prone to tobacco and shisha compared to those from households with a college education or higher.

The results align with study [15], which indicated that the majority of pupils possessed low educational attainment and socioeconomic position, utilising tobacco as a consequence of these factors. This study contrasts with study [17], which identified a substantial

correlation between student factors and their parents' education and knowledge (P = 0.001) .

The (HBM) posits individuals' beliafs may be sheped by thair demo. factors and prior sociel and medicel exp. [19]. A crucial component of experimental study desagn mitigation of any potential soureces beas the research [20]. Prior research indicated the uniformity of participants for demographic features, behavioural habits, study types, and socioeconomic status between the control and experimental groups. The uniformity among groups was crucial for establishing confidence in assessing alterations in participants' beliefs following the intervention. Certain findings aligned with study [24], which indicated no significant correlation between variations in information scores and various socio-demographic variables.

This study aligns with study [15], which reported that the ages of university students ranged from 21 to 23 years, and the body mass index (BMI) was 20.87, classified as normal weight. In 2017, the Iraqi Ministry of Health reported that the prevalence of smokers in Iraq was between 30% and 40%. Conversely, figures from the World Health Organisation in Iraq has reached approximately 7.2%. The findings of report [17] corroborated the research results, indicating that adolescents from families with "lower" income were more prone to tobacco and shisha those from families with "higher" income.

Section Two: Assessing the Effiveness of the Health Belief Model in Modifying Perceptions Regarding tobacco and shisha:

Examine the fundamental uniformity in the concepts of the Health Belief Model, motives, behavioural control, across the exp., con.:

The current study indiceted no statistically signi. variations existed in the participants' views, motivation, behavioural cont., and intentions at beseline (pre.test). indicates that the baliefs, moti., behave. con., and intentions were uniform among the exp. group and the con. greoup. The rationale is that it is expected for both the experimental and control groups to exhibit limited knowledge and

beliefs regarding tobacco and shisha during the initial assessment, as they have not yet participated in a program .

Furthermore, the homogeneity of the two groups accounts for the closely aligned and logical results.

Examination of alterations in individuals' attitudes, motivations, behavioural regulation, and intentions over periods of tobacco and shisha:

The results indicated no significant difference in the mean scores of beliefs between the research and control groups prior to the intervention; however, a significant difference emerged post-experiment, demonstrating the positeve impact of heaelth educetion on altering pupils heaelth beliafs regarding substence abuse and diminishing their per. Barr. to substence abuse.

A pre.test was admenistered to both the exp. and con. groeups prieor to the implementetion of the intervantion, as previously stated in this chapter. The participants in the experimental group were only subjected to the interventions.

The pre-test findings indicated that the average scores of participants in exp. and con. groueps were inadequate. indicates students' beliefs were minimal prior to the implementation of the intervention during the pre-test.

No statistically significant differences ($p > 0.05$) were seen between the study and control groups regarding students' belief scores linked to all elements of the health belief model about tobacco and shisha in the initial assessment. All students involved in the study, both in the experimental and con. groueps, homoganeous and possessed identical informetion and knowladge regarding tobacco and shisha at beseline .

Upon complation of the intervantion, a post-test-1 administered to both the exp. and con. groups. The resolts indicated distinct alteration the m., with the exception of the perceived barriers within the research group. This signifies that the intervention yielded a favourable impact, with the primary aim of this phase being to assess the results of the educetional progrem in contrast to the con. gr.

This resarch aligns with fendings from studaes on the targat gro. regarding tobacco and shisha addiction and the influance of educateon on the h. b. m. [28], [18]. outcome aligns con. [16], which demonstrated a sign. correletion between components of the h. b. m. and previntive behaviours regarding addection and mdical abuse, as well as a notable correletion among student variebles and the health belief model in relation to preventive behaviours against tobacco and shisha (P=0.002).

This outcame aligns with study [30], which demonstrated a sign. differince in pos.test levels mean scores among the intervantion and con. Gro.; additionally, the intervention group exhibited changes in preventive tobacco and shisha and behavioural dimensions ($t = 14.57$, $p < 0.001$).

This study [22] shown that following the implementation of the health education program, student awareness of drug use dramatically improved, indicating the program's success in enhancing tobacco and shisha awareness among students.

Likewise, the findings of our study [23] aligned with the observation that students' expectations concerning drug usage dramatically escalated following the implementation of an educational program, with a mean gap of 3.03. Ultimately, these results were obtained to assess the efficacy of HBM-based interventions in altering health beliefs around tobacco and shisha among university students at Al-Qadisiyah University. Consequently, health education serves as a mechanism for enhancing awareness among students and facilitates behavioural modification.

Furthermore, our study demonstrated a distinct variation among T0, T1, and T2 attributable to the educational program implemented among students, revealing that intention, perceived benefits, and perceived severity exhibited the highest estimated weighted averages, respectively, in comparison to perceived barriers. This represents the lowest level among health belief concepts, reflecting students' awareness of the severity of health issues and the complications of addiction. Additionally, it signifies an enhancement in students' conviction regarding the efficacy of

various strategies to mitigate addiction risk, ultimately leading to a resolute commitment to alter their attitudes and behaviours towards positivity.

Section three. Examination of the interconnection of the health beliefs model, motivations, behavioural control for both the experimental and control groups :

Conclusion and Recommendations

Conclusion:

1. The health intervention utilizing the h. b. m. underscores significance of tobacco and shisha prevantion and positevely influences pupils perciptions regarding perceived suscep., perceived seve., and perc. Bene. of recommended cessation interven., thereby aiding in addiction prevention, mitigating vareous health severity, and providing refer to action to stimulate "readiness" to quet among tobacco and shisha, as well as enhancing self-efficacy in their capacity to cease tobacco and shisha The perceived barrier to tobacco and shisha was the sole variable that shown no significant improvement following the intervention. This may indicate participants' scepticism regarding the authorities' capacity to offer specialized treatment facilities for addicts.
2. The intervention perceived as significantly influential in altering college students' beliefs about control, motivation to adopt preventive addictive behaviours, and tangible benefits constitutes critical structural elements of the health beliefs model. It appears essential to provide and implement understanding and educational preparation grounded in behaviour change models, such as the Health Belief Model, to mitigate high-risk behaviours within the study population**.**

Recommendations:

1. The government should formulate a strategic and systematic approach to combat drug traffickers.
2. Enhancing awareness within the Iraqi community via specialized teams in healthcare facilities. Collaboration with the Iraqi

Ministry of Health and Environment is essential to develop, enhance, and refine educational initiatives regarding the perils of tobacco and shisha and addiction.

3. The utilization of educational resources in healthcare environments serves as an indicator for addressing and transforming university students' health views on tobacco and shisha.
4. Establishing psychological therapy and counselling centers in universities to address addiction cases through ongoing support and psychological assistance.

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