



## Original Research

# Effectiveness of a Model-Based Intervention Based on Health Beliefs in Altering the Beliefs of Students Regarding Substance use

Rain Mahmood Ibrahim<sup>2</sup>, Mahmoud Mohammed Ahmed<sup>3</sup> Nasir Muwfaq Younis<sup>1</sup>,

<sup>1</sup>Prof, PhD .College of Nursing / University of Mosul/ IRAQ

<sup>2</sup>Assist. Lecturer. College of Nursing / University of Mosul/IRAQ

<sup>3</sup>Assist.Prof.PhD .College of Nursing / University of Mosul/ IRAQ

**E-mail co-author:**

[nasir.muwfaq@uomosul.edu.iq](mailto:nasir.muwfaq@uomosul.edu.iq)



### Abstract:

Substance use disorders (SUD) are significant health concern worldwide. Substance use is inveterate trouble which is associated with significant morbidity and mortality. A probability (simple random sample) of (N=80) undergraduate student in different specialties would be selected. The study sample will be recruited from (4) colleges in the University of Mosul's Engineering, Sciences, Medicine and Education Colleges. The sample will be randomly assigned into experimental and control groups of (40) undergraduate student for each group. Such chosen is employed of pool of topics that have the criteria contain students who have using on (Smoking, Hookah, Drug abuse and Alcohol).For during from 25of October / 2019 till 1 of February/2021. Data is analyzed using the "Statistical Package for Social Science" (SPSS) software for Windows (V:26).This finding indicated that before the intervention, mean scores for all concepts of HBM, add to Motivation, Control, and behaviors intensions of students they were almost equal. However, after the intervention were significantly different in the study group, while it was not significant in the control group.This study concluded that designing an HBM-based study could affect students' understanding and their behaviors in the field of substance abuse. Considering the positive correlation between construct of HBM, particularly in "perceived benefits and perceived severity" related to students' beliefs. These beliefs implied a significant correlation with each other and with the attention to the prevention of addiction.

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### Introduction:

There is growing concern about the effects of conflict and wars on substance use in Iraq (1). It emerged that substance abuse can have an effect on society Systems do not only serve as a health concern but also as a social issue.

And other opioid addictions, too health issues, coupled with social disadvantage (2). Students are among the groups with higher drug risk abuse because they don't know the illegal drugs' outcomes yet have no right convictions about them (3).

Substance use "alcohol, tobacco, hookah and illicit drugs" is a big issue of the world today (4). Substance use causes clinical, practical and significant sickness such as health problems, inability and defeat to meet responsibilities at work, school, house and university (5). Usage of substance by young adults. In a 2010 survey it was found that approximately 27 million psychological and social disorders were triggered by the use of "high-risk" drugs that posed a danger to their health. Around 300,000 casualties in 2015 were caused by substance use disorders (6). In terms of drug use disorders, evidence now shows that during puberty, more than (85 per cent) of those who meet requirements for a drug use disturbance early in their lifetime do so. Unlike adulthood, which transmits adolescents without meeting requirements for a drug use problem, it is unlikely that one will ever grow (7). However, preparing college has historically been looked a defensive factor against the development of substance use troubles in new decades substance use has become one of the most diffuse health troubles on university in the United States (8). However, to the World Health Organization (WHO), record (3.3 million) deaths in the world are attributable to alcoholism in 2012 (9), this statement specified that unintentional injuries comprised the second largest part of alcohol concerning deaths after cardiovascular diseases and that a large plurality of alcohol concerning deaths and injuries in the world are way traffic concerning and happen in developing countries. The most common age ambit of narcotic abusers in the world is (18 -25) years. Some of students are at these ages and narcotic abuse increase has been showed in them, among illegal drugs with consuming of (3.8%) is the most common abused narcotic in the world (10). The country of Iraq expects a population of 39.2 Million, Iraq is one of the West Asian countries bordering the Arabian Gulf. It is bordered by "Turkey in the north, Kuwait and Saudi Arabia in the south, Syria and Jordan in the west, and Iran in the east". Iraq's geographical position is also another agent that makes Iraq vulnerable to drug use, due to the long and spongy border between Iraq and Iran, as Iran

is facing increasing and severe substance use problems (11).

#### **Methods:**

True experimental design by using the random controlled trial approach is conducted to determine the efficacy of the HBM in changing the belief related to substance use among university students in Mosul City for during from 25 of October / 2013 till 1 of January /2024. The study is carried out in Iraq. In University of Mosul is a public university situated in Mosul. It's one of the largest educational and research centers in the Mosul City, and the second largest in Iraq, behind the University of Baghdad. Contain of 22 college in different specialties divided to four colleges in the University of Mosul's Engineering, Sciences, Medicine and Education College. Mosul University is located in the north side of the center of Mosul City at the right braid of the Tigris River. A probability (simple random sample) of (N=80) undergraduate student in different specialties would be selected. The study sample will be recruited from (4) colleges in the University of Mosul's Engineering, Sciences, Medicine and Education Colleges. A sampling pool consisted of 80 students distributed at four college in Mosul University included (Political Science, Engineering, Sciences, and Nursing Colleges). The sample will be randomly assigned into experimental and control groups of (40) undergraduate student for each group and are evenly distributed with esteem to their age and the colleges. Such chosen is employed of pool of topics that have the criteria contain students who have using on (Smoking, Hookah, Drug abuse and Alcohol). The university was divided into four main colleges, namely the Sciences groups, Engineering, Medical and Humanities faculties. A college was selected from each group included the Faculty of Science, Nursing, Engineering and Political Science chose four colleges using simple random sampling methods. Was selected 406 Students of 4 faculties of Mosul University by using simple random sampling method.. Including (123) Student, is used (Alcohol, Smoking, Drug) and (80) eligible students were randomly assignment selected.

opportunity, suggesting that people in normal circumstances are in a state of poor sleep. The fact that sleep period has decreased in recent year's further supports it<sup>(78-81)</sup>.

The subject's acceptance to sharing in the study acquired during the using of a specialized consent form (Appendix H). The random assignment of subjects separated into (2) groups: "study and control group" each with the same characteristics are conducted by prosecution a simple randomization technique. Each sharing assigned specified number, and then the random

distribution number created by using "Statistical Package for the Social Sciences" software. Final step of this randomization resulted in forty subjects in experimental group (ten subjects from Engineering College, ten subjects from Sciences College, ten subjects from Nursing College and ten subjects from Political Science Colleges), and forty subjects in control group (ten subjects from Engineering College, ten subjects from Sciences College, ten subjects from Nursing College(12-98).

**Results:**

**Table 1: Descriptive Statistics Measuring Change in Health Belief Model Concepts, Motivation, Behavioral Control and Behavioral Intentions Across Study Group and Over Times.**

HBM Concepts	Groups	M (SD)		
		(T 0)	(T 1)	(T 2)
Perceived Susceptibility	Exp	2.42 (0.76)	3.25 (0.41)	3.21 (0.46)
	Con	2.39 (0.48)	2.44 (0.70)	2.51(0.62)
Perceived Severity	Exp	3.12 (0.71)	3.89 (0.38)	3.82 (0.33)
	Con	3.17 (0.67)	3.28 (0.79)	3.23 (0.64)
Perceived Benefits	Exp	2.91 (0.76)	3.78 (0.41)	3.63 (0.90)
	Con	2.96 (0.78)	3.13 (0.72)	3.11 (0.88)
Perceived Barriers	Exp	2.75 (0.59)	2.69 (0.50)	2.70 (0.56)
	Con	2.91 (0.56)	2.93 (0.51)	2.87 (0.70)
Cue to action	Exp	2.31 (0.70)	3.18 (0.78)	3.35 (0.40)
	Con	2.27 (0.61)	2.61 (0.62)	2.83(0.61)
Perceived Self-Efficacy	Exp	2.27 (0.91)	3.22 (0.60)	3.26 (0.56)
	Con	2.41 (0.99)	2.56 (1.00)	2.55 (0.95)
Motivation	Exp	2.77 (0.76)	3.62 (0.36)	3.58 (0.48)
	Con	2.69 (0.90)	2.78 (0.77)	2.72 (0.91)
Behavioral Control	Exp	2.83 (0.99)	3.38 (0.30)	3.36 (0.45)
	Con	2.73 (0.54)	2.81(0.51)	2.89 (0.59)
Behavioral Intentions	Exp	2.81(1.05)	4.07 (0.70)	3.71 (0.69)
	Con	2.92(0.86)	3.08 (1.02)	3.04 (0.89)

Table 1: indicated that before the intervention, mean scores for all concepts of HBM, add to Motivation, Control, and behaviors intensions of students they were almost equal. However, after the intervention were significantly different in the study group, while it was not significant in the control group. The difference was higher among the intervention group than the control group and it was positive for all concepts except for perceived barriers. This issue indicates that education caused significant increase in scores of sensitivities, severity, perceived benefits, cues to action, self-efficiency, motivation, behavioral control and intensions. It further reduced perceived barriers of students in the intervention group. The visual observation for (Table 1) shows that the Mean scores and the Standard Deviations for the variables under the study were changed among participant's over times.

#### **Discussion:**

Table (1) as we mentioned earlier in this chapter, a pre-test was administered for both (study and control groups) prior to implementation of the intervention. The study (experimental) group participants were exposed to the interventions only. The pretest results revealed that the mean of participants in study and control groups is unaccepted (table 4). This means that the students' belief was low prior to implementation the intervention at pretest. It was also found that there were no statistically significant differences between study and control groups ( $p > 0.05$ ) in the score of the students' beliefs towards all concepts of Health Belief Model related to substance use at pretest (table 1). This means that all students who participated in the study (study and control groups) were homogeneous and they had the same information and knowledge about substance use at baseline. After that, all sessions of the intervention had been given for study group participants only. After completion the intervention, a posttest-1 was carried out for both groups (study and control). The results showed that there was a clear change in mean except for perceived barriers. . This indicates that the interference has become positively affected.

The main purpose of this step was to evaluate the outcomes of the educational program. And then after (2) months, a posttest-2 was also performed for both groups to investigate the efficacy of the education program. The main purpose of this step was to identify the efficacy of the educational program in retaining adequate information and knowledge by the study group participants. This research is consistent with the findings of studies performed on target group on substance use and the impact of education on the health belief model (99). This result is consistent with the study of (100) showed that there is a significant correlation between the health belief model parts and preventive behaviors of addiction and drug abuse and also a significant correlation between the variables of students and (HBM) in preventive behaviors of drug abuse ( $P=0.002$ ). This outcome is consistent with the (101) study that showed that there is a post-test level, the mean intervention and control groups scored substantially different; the preventive substance abuse in the intervention group, behaviors and their dimensions changed (  $p$  value  $< 0.001$  and  $t = 14.57$ ). In line with this study (102) who found after the introduction of a health education program, the awareness of drug use by students has increased significantly and this reflects the effectiveness of health education program to enhance the awareness of substance use amongst students.

#### **Conclusion:**

This study concluded that the health education through a health belief model demonstrates the importance of substance use prevention and has a positive impact on student perceptions of perceived susceptibility, perceived severity, perceived benefits of advised substance use stopping interventions in the prevention of addiction and reduction of different health hazards, Cues to action for activate "readiness" to quit within substance user and self-efficacy for confidence in their ability to terminate use of substance.

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