The Relationship between Drug Prevention Campaigns and Awareness to Reduce the Addiction Phenomenon among College Students in UAE

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Abstract

The study sought to investigate the impact of UAE drug prevention programs on awareness and the addiction phenomenon among college students in the UAE. The present study focuses on the national anti-drug abuse campaign championed by key factors such as the National Rehabilitation Center (NRC), Police Departments, other governmental and non-government organizations. The study considers the positivist research philosophy in a quantitative research methodology, deductive research approach, and survey research strategy. The population is defined as all students in higher educational institutions in the UAE; approximately 159,553 students are drawn into perspective. The survey questionnaire was mounted on the Survey Monkey data collection platform and disseminated through popular social media websites. Findings indicate that the NRC campaigns conducted across the UAE are effective in improving the level of awareness among students and young adults in the UAE. Moreover, the level of student awareness of drugs abuse is highly significant in reducing their level of addiction. Regarding the third objective, campaigns do not have any recognizable impact on reducing the addiction phenomena. The model was validated for those who have heard of the NRC campaign and did not apply to actors who had not heard about the NRC campaign. It is recommended that social work practice can be targeted towards the reduction of the drug addiction phenomena among young adults by increasing the levels of awareness on drug addiction.

Keywords: Awareness, Drugs, UAE, Students, Faculties, Performance

Introduction

Drug addiction is considered one of the fastest-growing problems among youth in developing countries (Lone & Mircha, 2013). Earlier drug policies have viewed drug addiction as a separate and distinct problem without interference with the socio-economic and socio-cultural factors of global communities. However, current developments have viewed it as a threatening issue that has penetrated various layers of societies (Ibrahim & Kumar, 2009; Kanagaveloo et al., 2015). In the words of Kanagaveloo et al. (2015), "every individual has the potential to engage in drug abuse, regardless of age or gender". Illegal drug trade around the world is rapidly on the rise and is reported to have a market of over 190 million people around the globe (Bhat et al., 2017). According to Evans-Whipp et al. (2004) on awareness in schools on the forms of drug policies and the effect they have on students, they mention that the youth, in particular, are highly involved in drug use. Thus, addiction among the youth is considered a global health issue that requires urgent attention (Bhat et al., 2017). Bhat et al. (2017) mentioned that the use of tobacco and alcohol, among others, have increased in recent times

despite increases in expenditure on a wide range of prevention programs. In highlighting the need for more effective awareness programs, Bhat et al. (2017) further report that if the current level of tobacco consumption is not reduced, about 250 million children alive are at risk of dying from tobacco-related health issues with severe implications in the near future. Bovin & Griffin (2007) argue that for addiction prevention programs to be effective, several factors need to be taken into consideration. Among these factors are the need to cover several risks and protective factors, the provision of developmental information, the provision of material assistance, the provision of comprehensive training, and the development of interactive methods (Bovin & Griffin, 2007). Mainly, these factors need to be integrated into prevention programs and must be transmitted through crucial channels such as schools and support communities for them to be successful. Virtually any substance that creates addiction as people lose their ability to choose not to take these substances after using them from the start has been considered an addictive agent or drug (Sidiq et al., 2016). Addictive drugs result in compulsive seeking and consumption of the drugs with consequences in various dysfunctional behaviours that interfere with the normal functioning of an individual, leading to problems within their families, workplace, or even the general community of the individual (Lone & Mircha, 2013). Over time, the range of drugs being abused has increased to cover everyday substances like brown sugar, morphine, chars, opiates, among others. While addiction is treatable, experts indicate that its treatment requires time and dedication for it to be effective in reducing or eliminating the addiction problem. Lone & Mircha (2013) point out that the treatment of addiction is more effective the longer it takes. However, while addiction treatment is a long-term process that requires several sessions of therapy, awareness plays a crucial role in the abstinence, prevention and treatment of drug addiction. Both Anand (2012) and Lone & Mircha (2013) assert that abstinence and prevention of addiction is a crucial element in the campaign against drug abuse through awareness. Ultimately, the prevention and treatment of addiction may not be possible or useful if there is a lack of awareness regarding the causative factors, symptoms, risks, support systems and treatments facilities available. The role of awareness in the fight against addiction cannot be overemphasised (Anand, 2012; Lone & Mircha, 2013; Sathvik., 2014). The proposed study seeks to follow in the path of Kanagaveloo et al. (2015), Sidiq et al. (2016), Sathvik. (2014), Bhat, Rahi & Sidiq (2017), Lone & Mircha (2013) and many other insights in this area to unearth the effectiveness of drug awareness campaign in the fight against drug addiction. This study seeks to investigate the influence of awareness on increased students' awareness of drug addiction and the reduced burden of addiction phenomenon in the UAE.

Literature Review

Impact of Anti-Drug Campaign

The effectiveness of drug abuse prevention programs in schools especially in UAE will be beneficial and meaningful to the students, parents, community as well as to the literature itself. The history of drug abuse showed that it is contrary to the purposes of Islamic Sharia in the preservation of their five essentials (religion, life, honour, mind and money), and this is apparent for the lowest pensive. With respect to study population, there is a lack of national strategy to address the drug problem, whether this strategy. Officials and specialists in the United Arab Emirates (UAE) declared that despite the limited number of cases of addiction among school students in the country, there is a need to tighten the supervision of drug traffickers and to tighten the legal penalties imposed on them effectiveness of drug and substance abuse prevention programs among schools in UAE. Thus, the main objective of this study is analysing the anti-drug awareness strategy from the perspective of Islamic Sharia in schools, and evaluates this strategy in light of the challenges posed by the problem of drug

abuse. The use of illegal drugs or the use of prescription or over-the-counter drugs or alcohol for purposes other than those for which they are meant to be used, or in excessive amounts. Substance abuse may lead to social, physical, emotional, and job-related problems.

Drug Addiction-To-Pleasure Theory

The addiction to pleasure theory was originally proposed by Bejerot (1975) and later developed by Robinson & Berridge (1993). As explained by Lettieri et al. (1980) phases, four main initiation sources have been identified: the therapeutic route, the professional route, the epidemic route, and the cultural route. In any of these initiation cases, addicts get into contact with drugs in one of the four routes that are not entirely socially undesirable but subsequently become dependent on them. The culture route, for instance, typically applies to Christian environments where some amount of alcohol is permitted. Other cultural hypes may equally encourage addiction to other substances in other religious communities. The professional route of initiation also encompasses medical staff getting addicted to drugs in similar circumstances. The endemic route is when drug addiction spreads through intimate relationships and other close relationships within a society where intoxicant is not socially accepted. Finally, the therapeutic route refers to the application of drugs to cure certain health problems and later to become addicts. At the final relapse stage, the theory posits that the addict may resort to other non-drug addictions such as gambling or obesity. Other external triggers may reactivate conditions even after the addicts believe that they have control over the addictive behaviour (Lustig, 2017). When students become addicted to drugs, they continue to acquire them through the same initiation stage and use them illegally. As Ortiz (2016) narrates, the pleasure grows, and addicts become nearly unable to stop consuming the drugs. Other sources of pleasure join in, and the situation becomes even more complicated (Al Shouk, et al., 2017). The engagement in other pleasures is typical of addicts in the UAE, as marijuana addicts would most likely consume other drugs such as opioids to increase the pleasure.

Learned Behavior Theory

The learned behaviour theory was originally proposed by Frederick (1972) and developed by Giovazolias & Themeli (2014). Frederick (1972) offers a mathematical model for all five stages or phases of the drug abuse phenomena. At the initiation stage, people with a weaker and dependent personalities are more likely to be involved in drug addiction. The same applies to individuals with rebellious tendencies. Continues usage is proposed as a function of some reinforcements, including the reduction in anxiety and an increase in habitual acts. There, the numerical value or probability for the usage of drugs is absolute or 1. At the transition stage, the introduction of motivation and habits remain constant while an alteration in the negative direction increases abuse behaviour. Here, the drug-seeking behaviour of the addict increases. At the cessation stage, nearly all the abuse or addictive equation changes with mainly the psychological and physiological changes. Finally, in relapse, the introduction of a new stimulus is strengthened through reinforcement.

As drug usage progresses, young adults begin to form habits and are motivated to consume more of the drugs and engage in associated unwanted behaviours. The learning theory of drug addiction explains that this occurs in the form of a learning curve and is particularly relevant when the prediction of attitude and behaviour is in focus (Giovazolias & Themeli, 2014). Even though the prediction of behaviour may not be the central theme of the present investigation, the reduced burden of addiction encompasses an aggregate behavioural change from the group to the societal level such that an overall effect of reduced drug use is felt. This theory, therefore, explains a fundamental aspect of the present study as consistent with behavioural change.

Drugs Subcultures Theory

The drugs subcultures theory was originally proposed by Johnston et al. (1978). This theory has gained the most support among the three theories of the present study; Golub et al. (2005), Hunt& Joe-Laidler (2015), and Birdseye (2013). Initiation is considered to be culturally oriented. Someone who smokes marijuana, for instance, would consider the use of other drugs more easily. The use of alcohol, predisposing factors, or friends using the same drug substance. This theory builds on other theories such as social learning and differential association; the drug-subculture theory stipulates that the predisposition to drugs may encourage the use of other drugs.The theory argues that actual drug use, especially marijuana, nearly always start from friend's usage of such drugs (Birdseye, 2013; Golub et al., 2005). Nonusers learn to smoke and define the sensation of intoxication. Initiation of other nonmedical drugs also occurs from having friends who use such drugs. Continuation occurs after initiation as the individual attempts to maintain the conduct norms as part of the larger group. The once risky behaviour becomes an expected behaviour, regularly abused. The individual may increase the abuse of multiple substances with a strong self-identity which also creates a social identity. At the transition stage, reciprocity conducts are encouraged, and the individual becomes more engaged in distributional conduct. The individual acquires enough drugs to sell to close ones and even distant persons. Engagement in drugs peddling makes these drugs exposed to less frequent users and even new users, particularly young adults (Blackman, 2014).As people engage in more drug use, they become a point of contact within the sub-culture as they transform other innocent young adults into addicts. They are able to transform others since they establish a solid connection of drugs supply within the sub-culture as they become more comfortable in consuming drugs. Moreover, they increase in rank within the sub-culture and do not have any form of remorse or fear in consuming these drugs.

Persuasion Theory and Drug Abuse Prevention

Even though the other theories evaluated look into the addiction phenomena, a number of theories may as well be used to explain the drug campaign phenomena (Baker et al. 1991; Office of National Drug Control Policy, 1997; Sixmith & Nic, 2008; Ferri et al., 2013). Some of the theories in this area include the health belief model (Glanz et al., 2002), the theory of planned behaviour or reasoned action (Ajzen, 1991), the super-peer theory (Strasburger et al., 2008), and the social learning theory (Bandura, 1977).The health belief model stipulated that mass drug addiction prevention can be achieved by providing information (Gabriel et al., 2019a). Under this model, drug awareness campaigns are carried out based on the severity of the health condition of the drug addicts. This model also elaborates on the knowledge of the associated benefits of avoiding drugs and the vital need for healthy behaviour (Gabriel et al., 2019b). Ultimately, the health belief model revolves around providing factual information about the positive and negative effects of drugs to deter people from using drugs (Glanz et al., 2002). The health belief model builds on the psychological and behavioural theory and has a strong inclination to health-related behaviour necessary to avoid illnesses (Gabriel et al., 2019). The theory of planned behaviour originally proposed by Ajzen (1991) build on the theory of reasoned action and explain that an individual's action is based on the main behavioural antecedents. These antecedents include attitude, social norms, and perceived behavioural control towards a given social phenomenon. The theory explains that these antecedents are mainly affected by external factors within the person's environment and background and directly influence the person's intention to behave in a particular manner.

Conceptual Framework

Addiction-related models lack explicit reference to any specific theoretical underpinning despite the presence of a high level of empirical observations. The ability of awareness campaigns to increase awareness among beneficiaries and reduce drug addiction is a clear and rational set of stimulus-response relationships in human endeavours. The proposed conceptual framework is presented in Figure 1 Below.
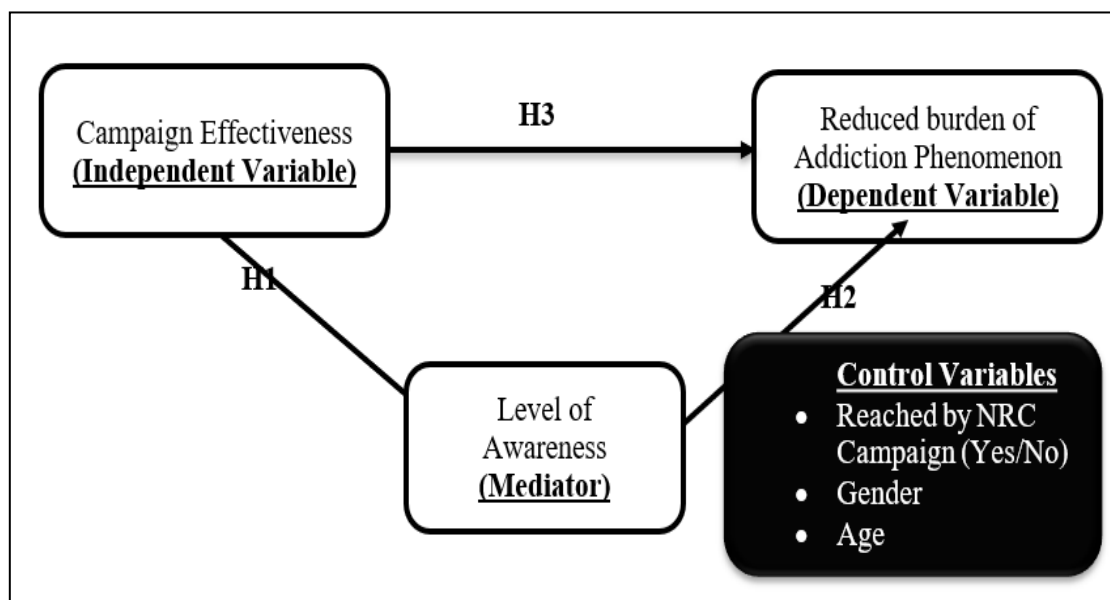

Figure.1 *Proposed Conceptual Framework*

- ✓ H1: UAE anti-drug addiction campaign has a positive effect on the increased level of awareness of college students in the UAE.
- ✓ H2: Improved drug addiction awareness has a positive effect on the decreasing burden of addiction phenomenon among college students in the UAE.
- ✓ H3: UAE anti-drug addiction campaign has a positive effect on the decreasing burden of addiction phenomenon among college students in the UAE.

Methodology

The study builds on quantitative research methods in a deductive research approach to theoretical reasoning, using the survey research strategy.(Habes, Al-Adwan, Al Rabat, et al., 2022; Habes, Ali and Tahat, 2022; Habes, Elareshi, Ali, et al., 2022; Habes, Elareshi, Salloum, et al., 2022; Tahat et al., 2022) The convenience sampling technique was implemented to permit all students who come across the survey the chance of contributing to the study. The convenience sampling technique was used to ensure that sample is maximized due to the lack of a clear sampling frame against which the population of UAE students may be randomly sampled. The survey questionnaire was administered to384 respondents over the leading social media platforms.

Results and Analysis

Quantitative results collected with the help of the survey questionnaire is presented in this part. The analysis and preceding stages of data collection were conducted in line with the methods and underlying procedures presented or explained in the earlier chapter of the study. Following the structural equation modelling analytical technique recommended by (Kaplan and

Haenlein, 2010; Elareshi et al., 2022) and (Hair et al., 2010) the study commences with a preliminary analysis of the data. Here, the responses are carefully screened and preliminarily analysed by testing the underlying multivariate assumptions, examining, interpreting, and drawing conclusions from the data collected as part of the research project.

Input Accuracy

the test for differences between the nationalities revealed that the responses from Emiratis, GFCC and Non-GCC nationals had no statistically significant difference in their mean scores (Table 4.1); this was true for campaign and awareness but not for addiction. The test for the difference was conducted using Turkey HSD and the LSD test for differences within addiction levels, and this is presented in Table 4.2. The multiple comparisons indicate that for the construct of addiction, Emiratis had a generally higher score than GCC and non-GC nationals.(Al Olaimat et al., 2022; Mohammad Habes et al., 2023; Mohammed Habes et al., 2023). The next highest mean was non-GCC sample respondents. The group with the least scores in addiction is GCC candidates. This insight was instrumental to understanding the results and the discussions, as well as practical implications of the findings to be discussed in the next chapter. An instance is that introducing addiction perception into the model at the individual prediction level may help better understand the perceptions of these groups within the UAE region. Reducing the burden of addiction may therefore target specific vulnerable groups with unique communication or messages.

Table 1 *ANOVA Test for Difference among Nationality of Respondents*

		Sum of Squares	df	Mean Square	F	Sig.
Campaign	Between Groups	.460	2	.230	.982	.376
	Within Groups	89.693	383	.234		
	Total	90.153	385			
Awareness	Between Groups	.107	2	.054	.239	.787
	Within Groups	85.779	383	.224		
	Total	85.886	385			
Addiction	Between Groups	.739	2	.370	5.173	.006
	Within Groups	27.365	383	.071		
	Total	28.104	385			

It is important to add that the groupings or subsets within the data reveal that the GCC and non-GCC share more variance, and the Emirati cases are the different groups within the dataset (Table 4.3). These groups may be considered in the latter part of the analysis to better understand the structure and profile of responses within the research model.

Normality Assessment

The next stage of the analysis was to assess normality and the existence of any outliers. To check normality, a general regression model was developed by employing campaign and awareness as predictors within the model. For this regression model, the Normal P-P plot of regression standardised residuals was presented. (Salloum et al., 2019; Alhumaid, et al., 2021) The histogram of the regression standardised residuals was closely observed for any unusual bell-shaped figure. In addition, the normal P-P plot was observed regarding the closeness of alignment with the 45angle. The model summary and the ANOVA results of the regression models are presented in Table 4.5 and Table 4.6. The coefficients table of the data is also presented in Table 4.7 together with the Variance Inflation Factors (VIF) and tolerance levels – indicators of multi-collinearity discussed in the later section of the chapter. Generally, preliminary analysis reveals

that the study model is generally weak and somewhat statistically significant, with an R-square statistic of 0.016. ANOVA test nearly failed (F = 3.133, p <0.5), and awareness was a statistically significant determinant of drug addiction reduction phenomena.

Table 2 *Model Summary – Normality Assessment*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.127a	.016	.011	.26870
a. Predictors: (Constant), Campaign, Awareness				
b. Dependent Variable: Addiction				

Table 4.6 *ANOVA – Normality Assessment*

	Model	Sum of Squares	df	Mean Square	F	Sig.
	Regression	.452	2	.226	3.133	.045b
1	Residual	27.562	383	.072		
	Total	28.104	385			
a. Predictors: (Constant), Campaign, Awareness						
b. Dependent Variable: Addiction						

Despite these results, a general visual observation of the data presented in Figure 4.1 and Figure 42 indicate a generally normal distribution. The histogram indicates that most of the responses are around zero, and the general responses depict a bell-shaped outline. The data is not excessively skewed to as observed. In addition, the normal P-P Plot of regression standardised regression show that the results are generally far from normality. No significant deviation from the 45o angle is observed in Figure 4.2. The next stage of the analysis was to check for outliers.

Table 3 *Coefficients - Normality Assessment*

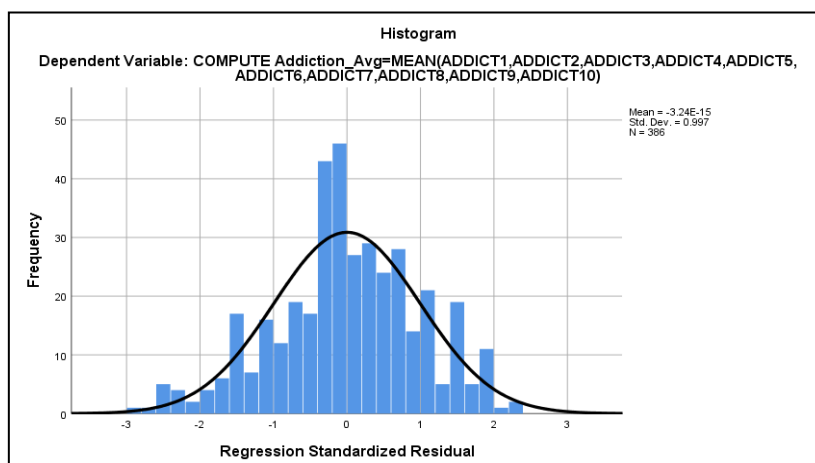|	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	3.673	.127		29.014	.000
1	Awareness	.064	.030	.112	2.167	.031
	Campaign	.024	.029	.043	.829	.408
	b. Dependent Variable: Addiction					

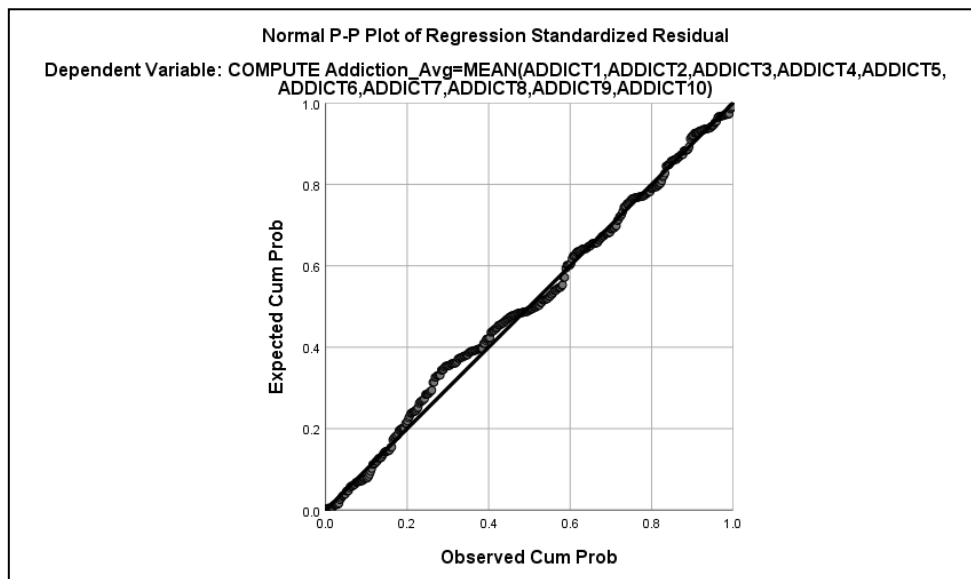**Figure 2** *Histogram – Regression Standardized Residual*

Figure 3 *Normal P-P Plot of Regression Standardized Residual*

Validity and Reliability of Measurement Model – CFA

The validity and reliability assessments of the EFA model is presented in Table 4. The reliability was measured using composite reliability, whilst validity was measured using the average variance extracted (AVE) test for validity. The reliability and validity tests were passed for all the constructs with the exception of addiction.(Habes, Ali and Pasha, 2021; Elareshi et al., 2022; Habes, Elareshi, Ziani, et al., 2022) The reliability test for addiction at the CFA level improved from what was originally observed at the EFA stage of the analysis. Validity was also .063 away from the 0.5 threshold but may be generally considered satisfactory. Following this stage, where all the model fit indices were within a highly acceptable range, and the flaws under the addiction construct may be considered generally satisfactory, the study proceeded to present the main structural model.

Table 4 *Reliability and Validity of CFA Model*

			Estimate	**CR**	**AVE**
CAMP5	<---	F1	0.875		
CAMP4	<---	F1	0.754		
CAMP3	<---	F1	0.808	.928	.720
CAMP2	<---	F1	0.863		
CAMP1	<---	F1	0.932		
AWARE4	<---	F2	0.708		
AWARE3	<---	F2	0.968		
AWARE2	<---	F2	0.67	.901	.670
AWARE1	<---	F2	0.955		
ADDICT10	<---	F3	0.536		
ADDICT8	<---	F3	0.799	.694	.437
ADDICT6	<---	F3	0.621		

The CFA analysis improved the data to a large extent and helped ensure that all the model fit indices of the model are within acceptable range; this indicates that the model is ready for final SEM analyses. Aside from the model fit indices, all tests for reliability and validity generally passed successfully. In the next section, the structural model is presented to help test the research hypotheses.

Structural Model

The structural model and general model fit indices are presented in Figure 4.13, and the main inter-relationships are in Table 5 As indicated in Table 5 , two out of three hypotheses were accepted. The impact of awareness campaigns on awareness and the impact of awareness on reducing the drug addiction phenomena (H2) had statistically significant results. (Mohammad Habes et al., 2023)The model fit indices presented in Figure 4.13 remain unchanged from Figure 4.12. The multiple correlations result for the model are also presented in Table 4.31. Following this section, the results of the hypotheses are discussed in dedicated sections.

Table 5 *Hypotheses Testing Based on the Structural Model*

			Estimate	S.E.	C.R.	P	Hypothesis	Remarks
AWARE	<---	CAMP	0.19	0.053	2.548	0.011	H1	Accepted
ADDICT	<---	CAMP	-0.099	0.027	-1.522	0.128	H3	Rejected
ADDICT	<---	AWARE	0.143	0.037	2.221	0.026	H2	Accepted

Table 6 *R-squared Statistic*

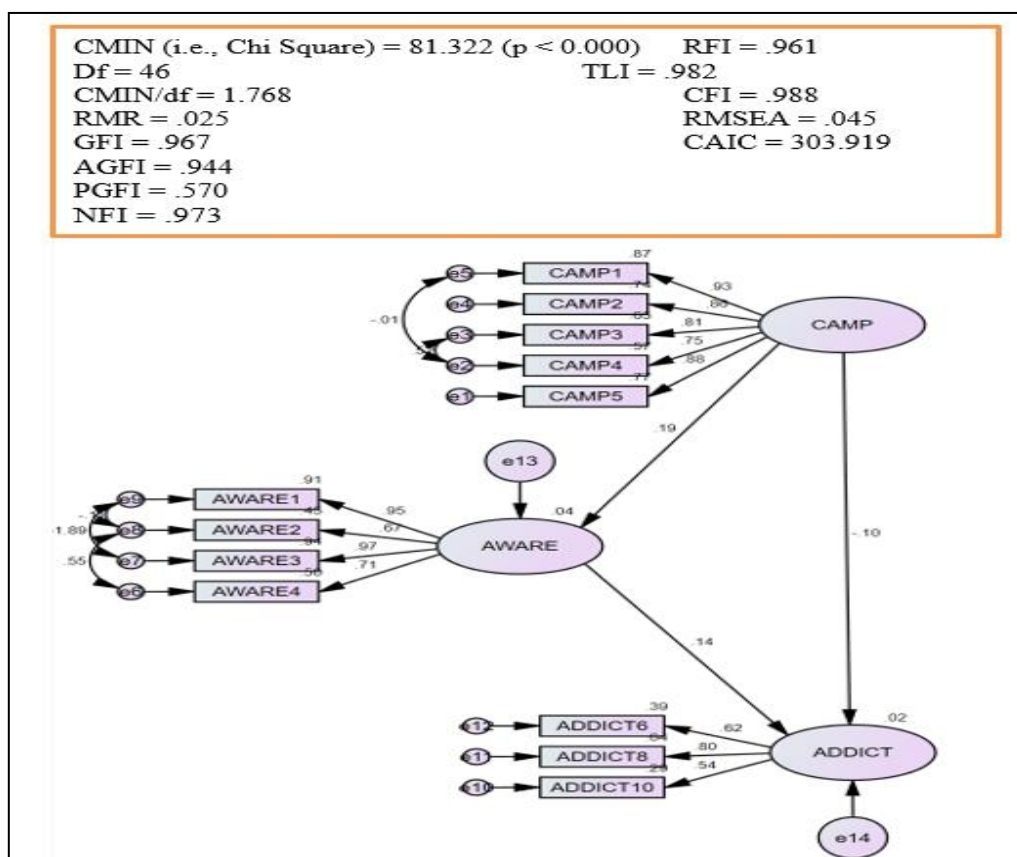|	Estimate
AWARE	.036
ADDICT	.025

Figure 4 *Main Structural Model*

The Role of Awareness Campaigns in Student Awareness Levels

The first hypothesis is that the UAE anti-drug addiction campaign has a positive effect on the increased level of awareness of college students in the UAE. The results presented are in support of this assertion where B = 0.19 (p < 0.05), R^2 = .036. The null hypothesis is

therefore rejected, and the alternative that campaigns improve awareness is accepted. This hypothesis is particularly true for awareness campaigns on TV channels, radio channels, and seminars/ other channels. In addition, the role of parents and tutors in improving awareness also evolved as significant to the promotion of drug addiction awareness. Finally, friends are a good source of awareness.

The Role of Awareness in Reduced Drugs Burden

The second hypothesis is that improved drug addiction awareness has a positive effect on the decreasing burden of addiction phenomenon among college students in the UAE. The results presented are in support of this assertion where B = 0.143 ($p < 0.05$), R^2 = .025. The null hypothesis is therefore rejected, and the alternative that awareness improves efforts to reduce the drug addiction phenomena. Considering the earlier hypotheses that addiction campaigns have a significant effect on awareness, it may be established that awareness is a significant mediator within the research model. A critical discussion of this mediation role is discussed in the next chapter.

The Role of Drug Addiction Campaign in Reduced Drugs Burden

The third hypothesis is that the UAE anti-drug addiction campaign has a positive effect on the decreasing burden of addiction phenomenon among college students in the UAE. The results indicate that the campaigns have no effect on reducing the addiction phenomena. The results fail to reject the null hypothesis.

Analysis of Control Variables

Three main control elements were maintained within the model; these include whether or not the respondent had been reached by the campaign, the gender of the student, and their age ranges. These additional observations were essential to witness the varying aspects of the data and the implications of these demographics to the study findings.

NRC Campaign as A Control Variable Within the Model

Controlling the model for the NRC campaign, the results are presented in Table 4.32 below. The category that has heard about the NRC campaign had results similar to the main findings. Those that had not heard about the NRC campaign did not establish any significant relationship between campaign, awareness, and reduction of drug addiction phenomena; (Al Olaimat et al., 2022; Wang, Ibrahiem and Li, 2022) only H3 was rejected as encountered in the main study. Based on these results, a difference exists within the model for those who have heard or been approached with the NRC campaign and those who have not.

Table 7 *Model Controlled for NRC Campaign*

			Heard NRC Campaign (Category 1)		Not Heard NRC Campaign (Category 2)		H	Remarks
			Estimate	P	Estimate	P		
AWARE	<---	CAMP	0.194	0.011	.137	.590	H1	Cat 1 had the same results as the main model
ADDICT	<---	CAMP	-0.106	0.132	-.099	.662	H3	Both categories had the same results are the main model
ADDICT	<---	AWARE	0.0156	0.028	.159	.498	H2	Cat 1 had the same results as the main model

Gender as a Control Variable Within the Model

The model was also controlled for the gender of the participants. Results in support of this observation are presented in Table 4.33. The results indicate that males had the same results as the model for H1 whilst females had the same results as the main model for H2. Both categories were rejected for H3 as observed in the main model. For males, the campaign had a significant effect on awareness, but awareness did not improve campaign effectiveness or reducing the addiction phenomena among males. For females, the awareness was significant in reducing the addiction phenomena even though the campaign did not improve awareness in any significant manner.

Table 8 *Model Controlled for NRC Campaign*

			Male (Category 1)		Female (Category 2)		H	Remarks
			Estimate	P	Estimate	P		
AWARE	<---	CAMP	0.238	0.015	.0497	.950	H1	Cat 1 same results as the main model
ADDICT	<---	CAMP	-0.077	0.388	-.038	.286	H3	Both categories had the same results are the main model
ADDICT	<---	AWARE	0.068	0.387	.175	.010	H2	Cat 2 same results as the main model

Age as a Control Variable Within the Model

The final control variable was the age group of the respondent. The results are presented in Table 9 . Age was grouped into five main categories. For category 1 (16-18 years), no form of relationship exists between constructs. This is the same for category 2 (19-20 years) and category 4 (23-24 years). For category 3 (21-22 years), awareness had a significant impact on the reduction of addiction phenomena. Category 5 was unidentified. Even though a difference existed across the age groups with regards to the relationship between campaign, awareness, and addiction, the sample within the categories was too small to land any meaningful observation across the groups.

Table 9 *Model Controlled for Age group of students*

			AWARE (DV) <--- CAMP (IV)	ADDICT (DV) <--- CAMP (IV)	ADDICT (DV) <--- AWARE (IV)
16-18	(Category 1)	Estimate	0.145	-0.145	0.041
		P	0.243	0.587	0.822
19-20	(Category 2)	Estimate	0.128	-0.026	0.170
		P	0.440	0.838	0.235
21-22	(Category 3)	Estimate	0.156	-0.141	0.152
		P	0.355	0.204	0.026*
23-24	(Category 4)	Estimate	0.238	-0.067	0.171
		P	0.114	0.648	0.212
25+	(Category 5)	Estimate	-	-	-
		P	-	-	-
	H		H1	H3	H2
	Remarks				

Discussion, Conclusion

The main result related to this question is that a positive and statistically significant correlation between campaign and awareness is found. More specifically, the national anti-drug addiction campaign is perceived to have a significant effect on the level of awareness among the respondents. This is reflected on their responses, in which the majority of college students heard about the NRC awareness campaign and gave a testimony of its positive effect on them by constituting (80.1%) of the total respondents. However, students who didn't hear about the NRC campaign, their responses showed that there is no significant impact between the three categories (campaign, awareness and additiction reduction). These results are aligned with Hilda& Ellen (2018) and Rasheed (2016) who concluded that the role of campaign programs (e.g., NRC campaign) is mainly engineered to create or increase awareness in addition to the essential role of other programs sponsored by government organisations and non-government organisations. More often than not, addiction campaigns have been referred to as awareness campaigns against drugs (Drugs and Alcohol Information and Support, 2013), which raise awareness and thus contribute to reduce drug usage in an often-combined approach (Drug Aware, 2018; HSE National Drug Awareness Campaign, 2007). The main result for this question is demonstrating a positive correlation between awareness and addiction. This means that the level of awareness significantly reduces the burden of the addiction phenomenon among the college students. To elaborate more, due to the significant impact left by campaign on awareness; significant effects of awareness is noticeable on reducing the burden drug addiction. In a similar fashion, the significant influence of awareness on the reduction of drug addiction established in this study are confirmed by other findings such as, Amir (2001), Alblooshi et al. (2016) and Chakravarthy et al (2013). For example, Chakravarthy et al (2013) indicted that the reduction of addiction through awareness has focused on special social structures such as families, schools, churches, and healthcare providers, which clarify the need for raising awareness within these structures, especially from the economic side. As Rasheed (2016) stated that the authorities should take into consideration the need to establish prevention and intervention campaigns in an attempt to reduce the economic impact of drug addiction within the UAE context. For instance, a 2-year minimum sentence as a strict punishment for drug peddling has been already applied in the UAE (Taylor, 2017).

In terms of gender differences, awareness has a significant effect on reducing the addiction phenomenon among females and not males. According to Bezrutczyk & Hampton (2019), the difference between male and female consumption of drugs and awareness levels is well documented. Even though the study does not venture into the significance of why the campaign was significant on the level of awareness among the male students and not the females, there is enough evidence to support the assertion that males and females behave differently on the subject of drug addiction (Argyriou et al., 2018).The main result for this question showed that there is no relationship between campaign and addiction phenomenon. This indicates that the national anti-drug addiction campaign is not reported to have any significant impact on reducing the burden of addiction phenomenon as the awareness has. This is also signified in the comparison between the total mean scores of the three categories (campaign, awareness and addiction reduction), in which awareness and addiction reduction scored higher than campaign. The low scores of awareness campaigns imply that the students had alternative sources of getting information on drug abuse effects other than the channels propagated by the NRC. The lack of coherence in the national campaign channels may be a cause of concern for the NRC and other government stakeholders in charge of the campaigns.Although there is no significant impact of campaign on reducing the burden of addiction, campaign is considered as a factor for increasing awareness and subsequently

reducing the burden of addiction. This means that campaign contributes in raising awareness, which is essentially affecting the reduction of addiction phenomenon. These results are supported by Drug Aware (2018), Drugs and Alcohol Information and Support (2013), HSE National Drug Awareness Campaign (2007), and Kanagaveloo et al. (2015) who concluded that there is a positive effect of awareness through campaigns on the significant reduction of addiction. This implies that awareness is a necessary mediator of the model, and campaigns cannot by themselves reduce the addiction phenomenon if awareness is not raised at the first place. This is essential to building up drug addiction campaigns, which may target the creation of awareness that serves in reducing the drug addiction burden (Alblooshi et al., 2016; Amir, 2001; Argyriou et al., 2018). As revealed by Taylor (2012) that parties who understand the physical, social, and mental merits and demerits of drug addiction tend to reduce their intake of it. This is not surprising as the mean score of the awareness campaign was low, implying that despite the plethora of anti-drug campaign programs exhausted by the UAE (Taylor, 2012; Rasheed, 2016), its direct impact on the reduction of drug addiction is ineffective. In fact, the orchestration of drug addiction campaigns and recovery have been mapped around family and social structures to create awareness within these structures. The multi-dimensional family therapy (MDFT) and other community prevention programs explain the need for awareness within these contexts (Chakravarthy et al, 2013) to limit the availability and proneness of illicit drug use (Barrett et al., 1990). However, the results of this question are not aligned with Anderson et al. (2010) who found that there is a relationship between campaign and reducing addiction. In terms of gender differences, NRC Campaign does not have any significant effect in reducing the addiction phenomenon from the perspectives of both males and females. This is attributed to what Al Shouk (2017) and Ramahi (2017) concluded that although contextual evidence in the Emirates indicates that the sources of campaigns are diverse and fragmented, still an extra support should be provided for raising awareness and thus leads to the reduction of addiction phenomenon. With regard to the age, only the age range of 21 and 22 was significant for the effect of awareness on addiction. None of the other age groups were significant in this regard. This is echoed by Chan Yuen Fook (2010) who concluded that the lack of awareness at early teens may increase the probability of being addicted.

Conclusion

From the main results, the following conclusion was reached. With regards to the first objective, it is concluded that the NRC campaigns conducted across the UAE are effective in improving the level of awareness among students and young adults in the UAE. The NRC Campaign has a positive influence on drug awareness among these groups, even though only marginally strong. This evidence is particularly true for male students and students who have heard about the NRC campaign. The general discussion also indicates that existing and documented evidence support this assertion. Results on the second objective showed that the level of student awareness of drugs abuse is highly significant in reducing their level of addiction. The evidence here is also true for females, even though not significant for male respondents. In addition, the age range of 20 to 21 years is more liable to reduce the drug addiction phenomena based on awareness creation. Literature evidence is in support of this objective surrounding the relationship between awareness and addiction phenomena. Results from the third objective showed no significant relationship between anti-drug campaigns and reduction of drug addiction. This evidence largely contradicts existing evidence on the area. In conclusion, awareness campaigns cannot directly influence the reduction of drug addiction. However, the national awareness campaign has a direct and significant impact on the level of students' awareness of drug abuse, which in turn has a significant effect on reducing drug abuse. This, therefore, makes the level of awareness a mediator between the awareness

campaign and reduction of drug addiction phenomena. The national drug awareness campaign is seen to be effective in increasing the level of awareness of drug abuse but not in reducing the burden. Based on the gained results, it is recommended for recruiting experts from different institutional bodies that have the capabilities to deal with different mindsets to effectively raise the level of awareness through campaigns.

Recommendations for Future Studies

Future studies should consider examining the effectiveness of drug awareness campaigns under the construct of the five main stages of drug addiction: stages of initiation, continuation, transition, cessation, and relapse as originally integral to the theories under observation. Such a study may assume a longitudinal research approach to assess the cohort at each stage of the addiction phenomena. An understanding of the behaviour of actors at each stage revealed critical insight for social work practice.In addition, it is recommended that studies focus on exploring the perceptions of government and educationists on how to tackle the addiction problem among young adults. Such empirical observation revealed contextual yet practical insight on the addiction phenomena. Engaging some young adults in focus group discussions also helped gather qualitative insight and compare these insights with the perceptions of the educationists and regulators/ government persons.

References

Al Olaimat, F. et al. (2022) 'Reputation management through social networking platforms for PR purposes: A SEM-based study in the Jordan', Frontiers in Communication, 11, p. 247.

Al Shouk, A. (2017). Drug addiction on decline in Dubai: New police campaign urges parents to spend time with children to ward off bad influences. Gulf News. Retrieved from https://www.gulfnews.com

Alhumaid, K., Habes, M. and Salloum, S.A. (2021) 'Examining the factors influencing the mobile learning usage during COVID-19 Pandemic: An Integrated SEM-ANN Method', IEEE Access, 9(1), pp. 02567-102578.

Andraka-Christou, B., Gabriel, M., Madeira, J., & Silverman, R. D. (2019). Court personnel attitudes towards medication-assisted treatment: A state-wide survey. Journal of Substance Abuse Treatment, 104, 72-82.

Baker, D., Roberts, D. E., Newcombe, R. G., & Fox, K. A. (1991). Evaluation of drug information for cardiology patients. British journal of clinical pharmacology, 31(5), 525-531.

Ballance, C. P., Griffin, D. C., Berrington, K. A., & Badnell, N. R. (2007). Electron-impact excitation of neutral boron using the R-matrix with the pseudostates method. Journal of physics B: Atomic, molecular and optical physics, 40(6), 1131.

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. Psychological review, 84(2), 191.

Bejerot, N. (1975). Drug abuse and drug policy. An epidemiological and methodological study of drug abuse of intravenous type in the Stocklholm police arrest population 1965--1970 in relation to changes in drug policy. Acta psychiatrica Scandinavica. Supplementum, 256, 3-277.

Beringer, J. E., Beynon, J. L., Buchanan-Wollaston, A. V., & Johnston, A. W. B. (1978). Transfer of the drug-resistance transposon Tn5 to Rhizobium. Nature, 276(5688), 633-634.

Best, D., Rawaf, S., Rowley, J., Floyd, K., Manning, V., & Strang, J. (2000). Drinking and smoking as concurrent predictors of illicit drug use and positive drug attitudes in adolescents. Drug and alcohol dependence, 60(3), 319-321.

Bhat Ahmadi, J., Maharlooy, N., & Alishahi, M. (2004). Substance abuse: prevalence in a sample of nursing students. Journal of clinical nursing, 13(1), 60-64.

Birdseye, D. M. (2013). The Role of Subculture Theory in the Treatment and Correction of Addiction and Drug Related Crime (Doctoral dissertation, California University of Pennsylvania).

Blackman, S. (1996). Drugs education and the national curriculum. The Stationery Office.

Elareshi, M. et al. (2022) 'Factors affecting social TV acceptance among Generation Z in Jordan', Acta Psychologica, 230, p. 103730.

Ferri, N., Siegl, P., Corsini, A., Herrmann, J., Lerman, A., & Benghozi, R. (2013). Drug attrition during pre-clinical and clinical development: understanding and managing drug-induced cardiotoxicity. Pharmacology & therapeutics, 138(3), 470-484.

Frederick, C. J. (1972). Drug abuse as self-destructive behavior. Drug Therapy, 2(3), 49-68.

Giovazolias, T., & Themeli, O. (2014). Social learning conceptualization for substance abuse: Implications for therapeutic interventions. The European Journal of Counselling Psychology, 3(1).

Glantz, M. D. (2002). Introduction to the special issue on the impact of childhood psychopathology interventions on subsequent substance abuse: pieces of the puzzle (Vol. 70, No. 6, p. 1203). American Psychological Association.

Golub, A., Johnson, B. D., & Dunlap, E. (2005). Subcultural evolution and illicit drug use. Addiction research & theory, 13(3), 217-229.

Habes, M. et al. (2023) 'E-Marketing and Customers' Bank Loyalty Enhancement: Jordanians' Perspectives', in The Implementation of Smart Technologies for Business Success and Sustainability. Springer, pp. 37–47.

Habes, M., Al-Adwan, M.N., Al Rabat, A.F.A.R., et al. (2022) 'Effects of YouTube Culture on Academic Performance among Students in Jordan: A Structural Equation Modeling Study', Journal of Intercultural Communication, pp. 56–65.

Habes, M., Ali, S. and Pasha, S.A. (2021) 'Statistical Package for Social Sciences Acceptance in Quantitative Research: From the Technology Acceptance Model's Perspective', FWU Journal of Social Sciences, 15(4), pp. 34–46. doi:http://doi.org/10.51709/19951272/Winter-2021/3 Statistical.

Habes, M., Ali, S. and Tahat, D. (2022) 'Healthy Living and New Media : A Review', in Springer, Cham, pp. 267–275. doi:10.1007/978-3-031-17746-0.

Habes, M., Elareshi, M., Ali, S., et al. (2022) 'Analyzing the Portrayals of Child Sexual Abuse of Urdu Newspapers in Developing Countries', Pertanika Journal of Social Science and Humanitiesopen, 2.

Habes, M., Elareshi, M., Salloum, S.A., et al. (2022) 'Students' perceptions of mobile learning technology acceptance during Covid-19: WhatsApp in focus', Educational Media International, pp. 1–19.

Habes, M., Elareshi, M., Ziani, A., et al. (2022) 'Smart interaction and social TV used by Jordanian University students', Technology in Society, p. 102110.

Habes, Mohammad et al. (2023) 'E-Marketing and Customers' Bank Loyalty Enhancement: Jordanians' Perspectives', in The Implementation of Smart Technologies for Business Success and Sustainability. Springer, pp. 37–47.

Habes, Mohammed et al. (2023) 'Technology-Enhanced Learning Acceptance in Pakistani Primary Education', in European, Asian, Middle Eastern, North African Conference on Management & Information Systems. Springer, pp. 53–61.

Hair, J.F. et al. (2010) 'Multivariate Data Analysis', Vectors, p. 816. doi:10.1016/j.ijpharm.2011.02.019.

Hair, J.F. et al. (2010) 'Multivariate Data Analysis', Vectors, p. 816. doi:10.1016/j.ijpharm.2011.02.019.

Ibrahim, F., & Kumar, N. (2009). The influence of community on relapse addiction to drug use: Evidence from Malaysia. Eur J Soc Sci, 11(3), 471-6.

Kaplan, A.M. and Haenlein, M. (2010) 'Users of the world, unite! The challenges and opportunities of Social Media', Business horizons, 53(1), pp. 59–68.

Kaplan, A.M. and Haenlein, M. (2010) 'Users of the world, unite! The challenges and opportunities of Social Media', Business horizons, 53(1), pp. 59–68.

Lustig, W. P., Mukherjee, S., Rudd, N. D., Desai, A. V., Li, J., & Ghosh, S. K. (2017). Metal–organic frameworks: functional luminescent and photonic materials for sensing applications. Chemical Society Reviews, 46(11), 3242-3285.

Ministry of Education (MoE) (2020). List of licensed Institutions in UAE. Retrieved from: https://www.moe.gov.ae/En/MediaCenter/News/Pages/licensedInstitutions.aspx

Ministry of Interior- UAE, 2016). UAE Observes International Day Against Drug Abuse https://www.aetoswire.com/news/uae-observes-international-day-against-drug-abuse/en

Moloney, M., Hunt, G., & Joe-Laidler, K. (2015). Drug sales, gender, and risk: Notions of risk from the perspective of gang-involved young adults. Substance use & misuse, 50(6), 721-732.

Petty, R. E., Baker, S. M., & Gleicher, F. (1991). Attitudes and drug abuse prevention: Implications of the elaboration likelihood model of persuasion. Persuasive communication and drug abuse prevention, 71-90.

Robinson, T. E., & Berridge, K. C. (1993). The neural basis of drug craving: an incentive-sensitization theory of addiction. Brain research reviews, 18(3), 247-291.

Salloum, S.A. et al. (2019) 'An Innovative Study of E-Payment Systems Adoption in Higher Education: Theoretical Constructs and Empirical Analysis.', International Journal of Interactive Mobile Technologies, 13(6).

Salloum, S.A. et al. (2019) 'An Innovative Study of E-Payment Systems Adoption in Higher Education: Theoretical Constructs and Empirical Analysis.', International Journal of Interactive Mobile Technologies, 13(6).

Sathvik, B. S., Chukir, D. M. O., Abo-Aldan, E., & Soliman, M. N. (2014). Adverse drug reaction monitoring and reporting: Knowledge, attitude and belief of physicians & pharmacists of Ras Al Khaimah, United Arab Emirates (UAE). International Journal of Pharmaceutical Sciences and Research, 5(2), 368.

Sixmith, J., & Nic Gabhainn, S. (2008). A process evaluation of the national drug awareness campaign 2003-2005.

Suhail, M. (2013). Drug addiction and the awareness regarding its possible treatment and rehabilitation of young drug users in Kashmir. International NGO Journal, 8(4), 80-85.

Suhail, M. (2013). Drug addiction and the awareness regarding its possible treatment and rehabilitation of young drug users in Kashmir. International NGO Journal, 8(4), 80-85.

Tahat, D.N. et al. (2022) 'News Media and Political Participation in the Middle East: Jordan as an example', in 2022 International Arab Conference on Information Technology (ACIT). IEEE, pp. 1–8.

United States. Office of National Drug Control Policy. (1997). National Drug Control Strategy: Budget summary. Office of the National Drug Control Policy..

Wang, S., Ibrahiem, M.H. and Li, M. (2022) 'Motivations Influencing Alipay Users to Participate in the Ant Forest Campaign: An Empirical Study', International Journal of Environmental Research and Public Health, 19(24), p. 17034.

Wang, S., Ibrahiem, M.H. and Li, M. (2022) 'Motivations Influencing Alipay Users to Participate in the Ant Forest Campaign: An Empirical Study', International Journal of Environmental Research and Public Health, 19(24), p. 17034.

ﻭHyun, J., Romero, L., Riveron, R., Flores, C., Kanagavelu, S., Chung, K. D., ... & Fukata, M. (2015). Human intestinal epithelial cells express interleukin-10 through Toll-like receptor 4-mediated epithelial-macrophage crosstalk. Journal of innate immunity, 7(1), 87-101.