Review Article

Predictors of attitudes towards substance use among university students in Jordan

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Abstract

Purpose: to explore whether a set of sociodemographic and psychological factors predict attitudes toward substance use among university students in Jordan.

Methods: A predictive explorative approach was used. Data collected from 405 university students using self-administered questionnaire.

Results: In general, students had marginal positive attitudes toward substance use. Family history of psychiatric illness found to be a risk factor (B = - 1.89, p = .01), while perceived social support from friends found to be a protective factor (B = .11, p = .015).

Conclusion: Family history of psychiatric illness and perceived social support from friends are significant predictors of attitudes toward substance use indicating the importance of assessing such factors by mental health counselor at academic settings.

Keywords: Attitudes toward substance use; University Students; Perceived Stress; Coping.

Introduction

University students are at risk of mental and psychosocial problems including substance use which in turn affect their potentiality, integrity and academic capabilities (Hamaideh & Hamdan-Mansour, 2014; Hamdan-Mansour, Mahmoud, Al Shibi, & Arabiat, 2018; Hamdan-Mansour, Dardas, AbuIsbaa, & Nawafleh, 2012). It has been reported that 1.0-10.0% of university students in Jordan were using substances such as tobacco, alcohol and other drugs (Hamdan-Mansour, 2011; Hamdan-Mansour, 2014). Positive association was also found between substance use and students' social and academic performance (Hamaideh & Hamdan-Mansour, 2014). Many factors found to contribute to substance use among college students including gender and economic status (Ranjbaran et al., 2018). Nevertheless, abstinent students, those who are and never used substances, are still at risk of using substance under the influence of peer pressure and availability of substances (Hendricks et al., 2015).

Psychological factors are also among the factors that may increase students' vulnerability of substance use problems. Such factors may include stress, using ineffective coping and social support (Hamdan-Mansour, 2010; Hamdan-Mansour, Halabi, & Dawani, 2009; Hamdan-Mansour, Dardas, AbuIsbaa, & Nawafleh, 2012). It has been reported previously that adolescents and young people are struggling to manage their academic and psychological strains in addition to burden due to social and economic demands (Hamaideh & Hamdan-Mansour, 2014; Hamdan-Mansour, Mahmoud, Al Shibi, & Arabiat, 2018; Hamdan Mansour, Sagarat, Shehadeh, & Thawabeiah, 2020). It is assumed also that substance use is more related to factors that occur before consuming substance where many of these factors are preventable (Stone et al., 2012). Thus, exploring factors that may influence students' attitudes towards substance use may sustain substance abstinence and enable controlling expected harmful effects of substance use in young people.

University is considered a transitional period in life and stressful situation for many young people, in particular, the first-year university students. Academic and psychological demands may affect students' ability to manage and balance between these needs leading to increased risk of substance use (Leonard et al., 2015). Thus, students' ineffective coping would create an environment that increases their risk to substance use; students would think that substance use assists them to relief and to cope with constraints. In addition, social relationships and social wellbeing such as their relationships with their families and peers play an equivocal role in using substances. While peer pressure and positive attitudes and behaviors towards substance use may increase risks of substance use, family support and families' negative attitudes toward substance use were found to be protective against substance use (Hamdan Mansour, & Marmash, 2007a; Hamdan Mansour, & Marmash, 2007b; Hamdan-Mansour, Puskar & Sereika, 2007).

Vulnerability to substance use among youth is a multifaced issue. However, those who assume positive attitudes toward substance use are at higher risk to use substances. To better control and sustain substance abstinence, factors related to and predictors of attitudes toward substance use need to be explored. Identifying those factors would improve and direct efforts towards the most effective preventive interventions. In Jordan, factors associated with substance use among university students have been adequately explored. However, prevention of substance use and sustaining substance abstinence would reveal to better healthy young people. Therefore, the *purpose* of this study was to explore sociodemographic and psychological predictors of attitudes towards substance use in Jordan. The research questions were:

- What is the prediction power of the psychological factors (perceived stress, coping and perceived social support) and selected demographic characteristics on the attitudes toward substance use?

- Is there differences in psychological factor (perceived stress, coping and perceived social support) and attitudes towards substance use related to selected demographic characteristics?

Methods

Study design

This is an explorative study utilizing cross sectional survey. Data were collected from university students using self-administered questionnaire in relation to psychological factor (Perceived Stress, coping and perceived social support), sociodemographic factors, and attitudes towards substance use.

Sample and setting

Data was collected from first year university students at one major university in Jordan. The university is considered the largest public university in Jordan with students representing different cultural, socioeconomic, and geographical background. Convenience sampling techniques was used to recruit the students. To be eligible to participate in the study the student has to be: 1) at least 18 years of age, 2) have a an intimate friend/s or parent/s who use alcohol, tobacco or illicit drug assuming that these at risk factors that may influence their attitudes towards substance use, 3) at his first year at the university, 4) have no history of family or friends death during the past 12 month as such students may still be grieving, and 5) have not been diagnosed with mental illness or substance use disorder. The other inclusion criteria reflect the demands of the study protocol: ability to read, write and speak Arabic, and absence of significant hearing or visual impairment.

Data collection procedure

Prior to data collection, ethical approval from the Scientific Research Committee at the targeted institution was obtained. Students were approached though an announcement placed at students' boards and through students affairs units whom invited students to the study announcement. Those who showed interest in participation were invited to contact the research team whom explained the study, its purpose, and significance. The students were assured of confidentiality, anonymity, privacy and voluntarily participation in the study. Then, students signed informed consents and screened for eligibility criteria. Students who met eligibility criteria were given the package that includes the questionnaires. The students were provided with sealed envelope and guided where to drop their surveys. The package was presented in Arabic language. Data saved at the personal computer of the primary investigator.

Instrumentation

All instruments were presented in Arabic language. The Arabic version of the tools used in this study except for the attitudes scale that was translated using the WHO guideline for validation and translation. Pilot testing was conducted to assess the clarity, suitability, and understanding for the selected instruments on 10 university students. The tools were:

- Attitudes towards substance use measured using the Beliefs and Attitudes of Substance Abuse Inventory (BASAI) (Fok, & Tsang, 2005) was used in this study. The BASAI is 24 items consists of three subscales: belief about the substances, attitudes towards substance abuse and antidrug information. Item responses are ranked in a 4-point Likert-type format. To achieve a total score of the attitudes scale and to conform with the direction of being all positive, the negative statement has been reversed so that all items are in one direction. The higher the score the more positive is the items. The total score will reflect then the positive attitudes. The scale demonstrated good internal consistency reliability. The reliability coefficient for the total scale was 0.82. The overall inter-rater reliability of the categories was 0.89. A Content Validity Index (CVI) was 0.92 and factor analysis supported the 3 subscales.

- Perceived social support measured by Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). This scale is 12-item self-reported scale to assess the perception of social support adequacy from the family, friends, and significant others such as health care team. Each item is measured using a 7-point Likert scale ranging from 1(very strongly disagree) to 7 (very strongly agree). The scale has three sub scales, family (items 3, 4, 8, &11), friends (items, 7,9, &12), and significant others (items, 1,2,5, &10). The total score ranges from 7to 84. The higher the score is the higher the perceived social support. This scale had good internal consistency for the scale as whole which was .88 (Zimet, Dahlem, Zimet, & Farley, 1988). The Arabic version of the scale has been used in this study. The scale has good internal consistency with Cronbach's alpha of 0.89 for the Arabic version (Hamdan-Mansour, et al., 2017).

- Coping skills measured using the abbreviated version of the COPE Inventory (Carver, 1997). The Arabic version of Brief COPE was used (Hamdan-Mansour, et al., 2017). Brief COPE is a 28 items scale measures the ways individuals use to cope with stress in their life. Brief COPE is formed of 14 domains (each consisted of 2 items) were responses ranged from 1 (I haven't been doing this at all) to 4 (I've been doing this a lot). The scale takes > 10 minutes to be completed. The scale has good internal inconsistency with Cronbach's alpha of .83 (Carver, 1997).

- Perceived Stress Scale (PSS) was used to measure perceived stress. The PSS is a 10- item questionnaire that measures the degree to which life situations are appraised as stressful (Cohen, Kamarck. & Mermelstein, 1983). One-half of the items are written in positive form, (e.g., in the last month, how often have you felt that you were on top of things?). The other half of the questionnaire is written in a negative form (e.g., in the last month, how often have you found that you could not cope with all the things that you had to do?). Item responses range from never (0) to very often (4). The PSS can be completed in 2-4 minutes. The Arabic version of the scale has been used in this study. The scale has good internal consistency with Cronbach's alpha of 0.80 for the Arabic version (Almadi, Cathers, Hamdan Mansour, & Chow, 2012).

Demographics

Gender, age, GPA, working status, working hours, living place, family history of substance use, parent separation will be treated as covariates. The demographic information obtained from an investigator-developed subject profile

Analysis plan

The computer program, IBM-SPSS Windows (version 24.0) used to describe attitudes toward substance use using the central tendency measures (means, and medians) and the dispersion measures (standard deviation and ranges). The intervention and control groups compared using comparative procedures (t-test and Chi-Square). Repeated measures for mixed model used to examine the effect of the intervention on risk, frequency and attitudes toward substance use among the students over time. This method of analysis allows flexibility in dealing with missing value, attrition, and unequal space assessment.

Results

Students descriptive

The sample consisted of 405 university students. As shown in table 1, 337 (83.2.8%) were females and 68 (16.8%) were males. Age ranged from 17 to 32 years, with mean of 19.8 (SD = 1.72). About 40% (n = 162) of the students were enrolled in health sciences faculties, while 36.3% (n = 147) were enrolled in general science faculties, and 23.7% (n = 96) came from humanistic faculties. Of the sample, 5.9% (n = 24) of the students were having a job, 50% (n=12) of them are working eight hours a day. The majority of the sample (95.3%, n = 386) were living in cities.

Attitudes towards substance use

As shown in table 2, the analysis showed that students had marginal positive attitudes with mean score of 2.33 (SD = .67) fort the whole scale. The highest mean score observed for item 1 "I think that substance abuse is commonly found in young people" (m =3.2, SD = .61), while the lowest was for item 3 " I will try to use these drugs under the influence of my good friends" (M = 1.60, SD = .75). Three items showed that students may have lack of awareness about the real risk of using substances and those are items 1 "I think that substance abuse is commonly found in young people", item 4 "The use of or abuse of these drugs is my personal choice" and item 5 "I am curious about these drugs" with mean score > .25 indicating serious and positive attitudes towards substance use.

Perceived Stress

The analysis showed (see table 3) that students had a mean score of 23.3 (SD = 6.1) with scores ranging from 8 to 40. About 25% of the students had a scores of 20 or less (P_{25} = 20), and a score of 26 or above (P_{75} = 26). Based on the expected scores on the scale which is from 1 to 40 and the giving above percentiles the results indicate that students in general had a moderate to high level of Perceived Stress.

Coping

The analysis (see table 3) showed that students had a mean score of 71 (SD = 10.6) with scores ranging from 29 to 99. Considering that the possible range of score is 28 – 112, and that 50% (n = 203) of the students had score of 71 or above, the results indicate that students had moderate level of coping effectively with life situations.

Perceived social Support: Regarding students' perception of perceived social support, the analysis showed (see table 3) that students' highest perception of perceived social support was from family with mean scores 22.3 (SD = 4.3). Of them, 25% of students had scores of 20 or less (P_{25} =18), while 25% of students had a scores of 25 or above (P_{75} = 26). However, the students had almost equal perception of social support from friends and others with mean scores of 21.2 (SD = 6). Regarding the perceived social support from friends, 25% of students had scores of 19 or less (P_{25} =19), while 25% of students had a scores of 25 or above (P_{75} = 25). Regarding perceived social support from others, 25% of students had scores of 18 or less (P_{25} =18), while 25% of students had a scores of 25 or above (P_{75} = 25). The results showed minor higher score of perceived social support from family than perceived social support from other. In general, perception of social support from other, family and friends were high given that the possible range of score for each domain is 4-28; the lowest level of perception was perceived social support from others although the scores reflecting high level of perception.

Bivariate analysis

To examine the differences in psychological factors related to students' demographics, an independent sample t-test was conducted

Table 1. Descriptive characteristics of university students (N = 405)

	Variable		n	%	M	SD	P25	P75
	Age		19.8		19.8	1.72	19	21
Gender		Male	68	16.8				
		Female	337	83.2				
Collage		Scientific	147	36.3				
		Health	162	40				
		Humanistic	96	23.7				
Working status		Yes	24	5.9				
		No	381	94.1				
Number of working hours		≤ 6 hrs.	12	50				
		> 6 hrs.	12	50				
Living area of the family		Cities	386	95.3				
		Badya	17	4.2				
		Small town	2	0.1				

Table 2. Attitudes towards substance use (N = 405)

	Disagree		Agree		M	SD
Attitude	**%**	**n**	**%**	**n**		
1. I think that substance abuse is commonly found in young people	94.8	384	5.2	2	3.42	.61
2. It should not be harmful if I just use these drugs just once	27.4	111	72.6	294	1.98	.91
3. I will try to use these drugs under the influence of my good friends	11.1	45	88.9	253	1.60	.75
4. If I use these drugs, it would be just for fun	22.2	90	77.8	309	1.82	.85
5. The use of or abuse of these drugs is my personal choice	54.1	219	45.7	186	2.58	1.41
6. I am curious about these drugs	55.3	224	44.7	181	2.56	.94
Total Scale	**44.15**		**55.82**		**2.33**	**.67**

to examine differences among students' psychological factors including perceived stress, perceived social support (PSS-O, PSS-FA and PSS-FR) and coping related to age groups (20 years or less and more than 20 years) the analysis showed (table 4) that there was a significant difference in the perceived social support from family according to the age groups (t = -4.3-, *p* =.046) with mean 20 years or less (M= 22.4, SD= 3.8) higher than 20years or more (M= 61.2, SD= 14.2). While, there were no significant differences among students' psychological factors, perceived stress, perceived social support (PSS-O and PSS-FR) and coping (p <.05) related to their age. However, there was a significant difference found between students' perceived social support from other related to their gender (t = ,126, *p* = 0.036). Regarding differences in psychological factors, perceived stress, perceived social support (PSS-O, PSS-FA and PSS-FR) and coping related to work status, no significant difference was found (*p* >.05).

To examine the differences among psychological factors, perceived stress, perceived social support (PSS-O, PSS-FA and PSS-FR) and coping in relation to student' collage and living area one-way ANOVA was conducted. the analysis showed (table 4) that there was a significant difference in the perceived social support from other according to their collage (F =5.2, *p* = 0.006). Using post hoc comparison (Scheffé), the analysis showed that that those who are students at humanistic collage (M = 22.2, SD = 4.7) were significantly different (higher mean) in their PSS-O score from those at scientific collage (M = 20.3, SD = 4.4). Regarding differences in psychological factors, perceive stress, perceived social support (PSS-FA and PSS-FR) and coping efficacy related to collage, no significant difference was found (*p* >.05).

Table 3. Descriptive statistics of psychological and social (N = 405)

Variable	M	SD	P25	P50	P75	Min	Max
Perceived Stress	23.3	6.1	20	23	26	8	40
Coping skills	71	10.6	66	71	76	29	99
Social support – family	22.3	4.3	20	22.3	26	4	28
Social support – friends	21.3	4.6	19	22	25	4	28
Social support – others	21.1	4.6	18	21	25	9	28

Table 4. Differences in psychological and social variables related to demographic characteristic (n = 405)

Variable	Type of college		Living area		Age		Gender		Having work	
	F	P	F	P	t	P	t	P	t	P
Coping	.060	.94	4.1	.007	-1.0-	.3	-1.8-	.4	.78	.9
Stress	.28	.76	2	.11	1.5	.9	-.85-	.9	-.07-	.9
PSS-O	5.2	.006	.20	.9	-.65-	.39	.13	.036	1.1	.96
PSS-FA	.52	.60	1	.4	-.43-	.046	.51	.16	1.1	.7
PSS-FR	.792	.45	.45	.71	-1.1-	.17	.61	.48	2.1	.19

PSS-O: perceived social support from others; PSS-FA: perceived social support from family; PSS-FR: perceived social support from friends

Table 5. Regressing demographic, psychological; and social factors on attitudes towards substance use (n = 405).

Model	B	SE-B	*p*
Cope	-.02	.016	.323
Stress	.01	.026	.860
PSS-FA	-.05	.053	.365
PSS-FR	.11	.045	**.015**
PSS-Others	-.06	.048	.221
Gender	-.24	.405	.552
School type	-.34	.214	.108
Working status	.20	.670	.765
Family history of psychiatric illness	-1.89	.758	**.013**

Furthermore, using Pearson correlation coefficient (*r*), the analysis showed that none of the psychological or social factors is correlated significantly with attitudes toward substance use (*p* > .05).

Predicting attitudes toward substance use

A standardized linear regression analysis was conducted to test prediction power of the selected demographic characteristics (any of your family members suffer from psychiatric illness, gender, working status), psychological and social factors (stress, PSS-FR, you school, cope, PSS-FA, PSS-others) on attitudes towards substance use. The analysis (see table 5) showed that the model was statistically significant ($F_{9, 307}$ = 2.00, *p* = .038). The analysis showed that R^2 = .057 indicating that only 5.7% of variation of attitudes toward substance use is due to the factors of the model. The analysis of the model shows also that the only two factors that found to be significantly predicting attitudes toward substance use were perceived social support from friends and family history of psychiatric illness. While all other factors were not statistically significant predicts; family history of psychiatric illness found to be risk factor (B = - 1.89, *p* = .01), and perceived social support from friends found to be a protective factor against attitudes toward substance use (B = .11, *p* = .015).

Discussion

The first year in university is characterized by transition, intense academic and social pressure as well as the feeling of independence as a result of separation from parental supervision (Njoroge, 2017). Vulnerability to substance use among university students is a major concern. However, factors such as attitudes toward substance use that may anticipate and increase such vulnerability deserve high level of attention to control and lessen the harmful effects of substance use. Therefore, this study tested whether a set of sociodemographic and psychological factors predict attitudes toward substance use among university students in Jordan.

We found that the majority of students had marginal positive attitudes toward substance use. The results do correspond with cultural background of students whom are Arabs. In the Arabian culture, which is mixed with Islamic teaching, using substance is prohibited and socially disgraced. We would expect that students in this study will have negative attitudes to support the social and cultural stigma associated with substance use. This could support that substance use is a real concern across cultures and social norms. Different explanation can be posed here. The lack of awareness of students regarding the real risk of using such substances, the increased social and psychological strains, economic ffacto0rs, and academic anxiety are among the most reported psychological and social problems that university students are suffering in Jordan and the Arab region (Hamaideh, & Hamdan Mansour, 2014; Hamdan-Mansour, Mahmoud, Al Shibi, & Arabiat, 2018). Here we are not much concerned about the attitudes and rather about the link found between attitudes and using substances later in life. Taremian and colleagues (2018) maintained that positive attitudes toward substance use were anticipated in different types of substances. Thus, positive attitudes towards substance use is an alarming call to make a proper intervention to prevent substance use.

Although students had high to moderate level of perceived social support and coping effectively with life situations, our results supported other reports and a recent literature (Organization for Economic Co-operation and Development [OECD], 2017; Bamuhair 2015) that university students had a moderate to high level of perceived stress and this is mainly because of academic requirements, time pressure, social adjustment, and interpersonal relationships (Hamaideh, & Hamdan Mansour, 2014; Hamdan-Mansour, Mahmoud, Al Shibi, & Arabiat, 2018).

Among the sociodemographic factors, only family history of psychiatric illness was found to be a risk factor for positive attitudes towards substance use. Parents with mental illness are less able to provide their children with supports needed to develop appropriate affect regulation, problem solving and self-awareness skills, and are less likely to model effective problem solving and communication skills (Mowbray and Oyserman, 2003). This emphasizes the role of parental mental health on attitudes towards substance use among university students and implies that preventive programs should focus on family-related factors.

Among the psychological factors, perceived social support from friends was a predictor of negative attitudes towards substance use among university students. Peer pressure is known to be an important predictor influencing adolescents and young people's decision-making and shaping their behaviors either negatively or positively. Applying the notion that attitudes is gateway towards conducting the behaviors, negative attitudes towards substances use would serve as protective factor against using substance among university students. On the other hand, those with positive attitudes towards substances use is influenced by peer pressure leading to vulnerability to substance use. This has been noted previously where peer pressure predicted students' substance use among university students (Mekonen et al 2017).

One limitation of this study is related to sampling in which the sample selected from one major university while multisite study might provide better understanding. The study used a sample of nonusers; however, choosing a sample of both users and no users might allow comparison in attitudes and psychosocial factors, as well.

Conclusion

Results of the present study showed marginal positive attitudes toward substance use in the majority of the students. The study found that family history of psychiatric illness and perceived social support from friends are significant predictors of attitudes toward substance use. The study infers that although psychological factors might cause harmful effects on university students, attitude towards substance use was not influenced greatly by. The study has implication to mental health counselors at academic settings that one essential non-threatening step towards substance use is to assess students' attitudes towards substance use. This can be in line with psychological and social wellbeing factors especially for those who suffer academic and personal problems and at their first year of the university.

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