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Predictors of mental health services help-seeking behavior among university students

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Abstract: University students have a high prevalence rate of mental illness. Mental health services (MHS) are known to be effective but they are underutilized. To predict university students' intention to seek help of MHS. A cross-sectional correlational design was used in this study. One hundred and thirty-four students from two public universities in Jordan were recruited, and were asked to complete a printed questionnaire. Using hierarchical regression modeling, five predictors were included to predict students' intentions: attitudes toward MHS, subjective norm, perceived behavioral controllability, depression level, and depression literacy level. During a psychological stress, only 17 (13.6%) students reported seeking help of MHS as a possible option for them. Students had a very low depression literacy level, and 77 (57.5%) had a mild to moderate level of depression. Three regression steps were created. All steps were statistically significant, and all predictors had a significant effect except depression literacy level in the third step. The first step, which included three predictors (attitudes, subjective norm, and perceived behavioral controllability), accounted for 23.5% of explained variance. Attitudes toward MHS were the strongest predictor in all steps. Conducting campaigns about mental illness and the effectiveness of MHS may improve students' literacy levels, and may improve MHS utilization rate.

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PUBLIC INTEREST STATEMENT

This research investigates the prevalence rate of mental illness among Jordanian university students and the factors that affect their intention to seek help of Mental Health Services (MHS). So, 134 students from two public universities in Jordan were recruited and were asked to complete a printed questionnaire. Findings suggest that during a psychological stress, the majority of students may not seek help of MHS. Instead, they prefer religious practices or talking to family or friends. Approximately, half of the students had a mild to moderate level of depression. Attitudes toward MHS, social influence, perceived behavioral control, and severity of depression were significant factors in determining students' intention to seek help of MHS. Conducting campaigns in universities about mental illness and the effectiveness of MHS may decrease stigma toward mental illness and may improve MHS utilization rate. This study shows policy-makers the need for establishing MHS in all universities.

Subjects: Behavioral Sciences; Education; Medicine, Dentistry, Nursing & Allied Health

Keywords: College students; mental health; help-seeking behavior; depression; theory of planned behavior

1. Introduction

It is estimated that one out of five Americans suffer from mental illness, and during their lifetime, 50% of adult Americans will have a current diagnosis or history of mental illness (National Institute of Mental Health [NIMH], 2012). The negative impacts of mental illness on all dimensions of patients' health are serious and may explain the increasing cost of treatment. An estimated 1.3 million Americans attempted suicide in 2012, and at least 30,000 successfully ended their life (Substance Abuse and Mental Health Services Administration [SAMHSA], 2013; Townsend, 2014). Unfortunately, 90% of suicidal patients suffer from mental illness (Townsend, 2014).

Mental health treatment services (MHS) are usually available for people with mental illness, but they are underutilized. Approximately 25 million (60%) Americans with mental illness did not access MHS in 2012 (SAMHSA, 2013). In Jordan, an Arabic country, the prevalence rate of mental illness in 2011 was approximately 13% (World Health Organization [WHO], 2011). It is estimated that 75% of Jordanian patients with mental illness did not utilize MHS (WHO, 2011). Several factors may explain the low rate of utilization including a negative attitude towards treatment, self and societal stigma related to mental health treatment, and a low ratio of mental health professionals to patients (Al Ali, Alqurneh, Dalky, & Al-Omari, 2017; Al-Krenawi, Graham, Al-Bedah, Kadri, & Sehwal, 2009; Aloud & Rathur, 2009; Hasan & Musleh, 2017; WHO, 2013).

The prevalence of mental illness among Jordanian university students is higher than the public community (approximately 50% of students), and this could be explained by several reasons (Al Matarneh & Altrawneh, 2014; Ismayilova, Hmoud, Alkhasawneh, Shaw, & El-Bassel, 2013; Rayan & Jaradat, 2016; Zawawi & Hamaideh, 2009). First, university students are at the age of early onset of mental illness (Blanco, Okuda, & Wright et al., 2008; Ibrahim, Kelly, Adams, & Glazebrook, 2013). Second, being a member of an Arabic collectivist culture may increase the perceived and social stigma toward mental illness and treatment (Al Ali et al., 2017; Al Matarneh & Altrawneh, 2014; Ismayilova et al., 2013; Rayan & Jaradat, 2016; Zawawi & Hamaideh, 2009). Finally, the stress caused by academic life, and difficulty balancing it with social life may decrease functioning level in both aspects (Blanco et al., 2008; Rayan & Jaradat, 2016).

Several researchers investigated the predictors of mental health help-seeking behavior, but none of the researchers used the Theory of Planned Behavior (TPB) to predict MHS help-seeking behavior in Jordan. The TPB assumes that attitudes toward a behavior, subjective norm, and perceived behavioral control directly affect a person's intention to perform a behavior and, ultimately, affects the actual behavior (Fishbein & Ajzen, 2010). In the context of mental health, we propose that students' attitude toward MHS, the perceived social approval to seek MHS (subjective norm), and perceived behavioral control may affect the actual MHS help-seeking behavior. TPB successfully predicted participation in healthy behaviors such as physical activity, smoking cessation, and blood donation (Fishbein & Ajzen, 2010). TPB also successfully predicted individual's intentions to participate in MHS (Compton & Esterberg, 2005; Mo & Mak, 2009; Skogstad, Deane, & Spicer, 2006; Woods, 2013). The importance of using the TPB in predicting help-seeking behaviors is related to the high predictive power (i.e. explained variance or R^2) when compared to other behavior-related theories such as the health belief model (Buscemi, 2003; Şimşekoğlu & Lajunen, 2008; Thornton & Calam, 2010).

Two other important factors may also affect MHS help-seeking behavior; the severity of a patient's mental illness and their literacy level about mental illness. The health belief model assumes that the perceived severity of an illness may motivate a patient to seek treatment (Champion & Skinner, 2008).

So, the severity and diagnosis of mental illness may affect help-seeking behavior to MHS. Since Depression is the most common type of mental illness among Jordanian university students (Ismayilova et al., 2013; Zawawi & Hamaideh, 2009), a decision was made to measure the severity of depression and its effect on help-seeking behavior. Moreover, increased level of knowledge regarding mental illness may improve help-seeking behavior (Darraj, Mahfouz, Sanosi, Al Badedi, & Sabai et al., 2016; Rootman & Gordon-El Bihbety, 2008). The purpose of this study is to a) investigate the effect of attitude toward MHS, subjective norm, and perceived behavioral control on subjects' intention to seek help of MHS b) examine the effect of depression level on help-seeking behavior and c) examine the effect of depression literacy level on help-seeking behavior.

2. Materials and methods

2.1. Design and setting

This study was conducted using a cross-sectional correlational design. The sample was recruited from two public universities in Jordan. Each university has an enrollment of more than 20,000 students and offers a wide variety of degrees.

2.2. Sample and procedure

The sample size was calculated using G*Power software (Faul, Erdfelder, Buchner, & Lang, 2009) by entering the following data: medium effect size ($f^2 = 0.15$), a power of 0.8, alpha level of 0.05, and five predictors. The sample included 134 university students, 67 students from each university, who were recruited consecutively using convenience sampling method. Students were eligible to participate in this study if they were 18 years or older and Arabic speaking. Students were excluded if they were beyond first year with a major of nursing or medicine. The total number of students who were contacted was 155, among them, 21 students refused to participate in the study, so the response rate was approximately 86.5%. A research assistant explained to potential subjects the purpose of the study, inclusion/exclusion criteria, and benefits of the study. Participants gave consent for their data to be used in the research. Data were collected using a printed questionnaire. Institutional review board (IRB) approval was obtained from the study setting.

2.3. Measures

The theory of planned behavior questionnaire was translated into Arabic (Mo & Mak, 2009).

- (1) *Attitude towards help-seeking (ATTHS)*. This concept was measured using a 5-item scale including items such as: For me, attending mental health services is: very useful-very useless). Items were measured on a 6-point semantic differential scale, with higher scores indicating a more positive attitude towards help-seeking. This scale showed good internal consistency (Cronbach's alpha = .84) (Mo & Mak, 2009). In this study, ATTHS showed good internal consistency (Cronbach's alpha = .82).
- (2) *Subjective norm (SN)*. SN was measured using a 3-item scale. Responses were rated on a 6-point Likert scale, with higher scores indicating higher levels of perceived social influence. This scale showed good internal consistency (Cronbach's alpha = .85) (Mo & Mak, 2009), and in this study, it was very close to reaching acceptable levels (Cronbach's alpha = 0.69).
- (3) *Perceived behavioral control (PBC)*. PBC was measured using a 3-item scale. Responses were rated on a 6-point Likert scale, with higher scores indicating higher levels of perceived ability and controllability to seek help. This scale showed acceptable internal consistency (Cronbach's alpha = .77) (Mo & Mak, 2009). In this study, the internal consistency of PBC was 0.71.
- (4) *Help-seeking intention*. Help-seeking intention was measured on a 3-item scale. Responses were rated on a 6-point Likert scale, with higher scores indicating higher levels of help-seeking intention. This scale showed high internal consistency (Cronbach's alpha = 0.97) (Mo

- & Mak, 2009). In this study, this scale showed acceptable internal consistency (Cronbach's alpha = .76).
- (5) *Depression*: the Arabic version of the Center for Epidemiological Studies Depression Scale (CES-D) was used to measure the level of depression. This scale was developed by Radloff (1977), and it is composed of 20 items, with higher scores indicating a higher level of depression (Kazarian & Taher, 2010). Each item has a range of responses between 0 (rarely) to 3 (most of the time), and thus, the range of scores is from 0 to 60. Different cut-off points are used to determine depression status. In this study, we used 20 as a cut-off point as it showed better sensitivity and specificity scores than other cut-off points (Vilagut, Forero, Barbaglia, & Alonso, 2016). CES-D showed high internal consistency (Cronbach's alpha = 0.84) (Kazarian & Taher, 2010). The internal consistency in this study reached excellent levels (Cronbach's alpha = 0.90).
 - (6) *Depression Literacy*: The Arabic version of the Depression Literacy Questionnaire (D-Lit) was used to measure the level of knowledge regarding depression (Darraj et al., 2016; Griffiths, Christensen, Jorm, Evans, & Groves, 2004). This scale consists of 22 items, and the respondent chooses one of three options (true, false, or I don't know). For each response marked true, 1 point was added to the total score. The range of score is from 0 to 22, and a higher score means a higher level of knowledge regarding depression. Cronbach's alpha and test-retest reliability were 0.78 and 0.92, respectively (Darraj et al., 2016).
 - (7) *Demographic and clinical factors*: demographic data collected included age, gender, housing, educational level, and major of study. In addition, clinical and psychological data were collected including history of physical or mental illness. Students were also asked to report any type of psychological stress during the previous 2 months. Next, students were asked to select all that apply regarding their preferred method of coping with these stressful situations. The options were seeking a psychiatrist or psychologist, religious practices (praying, reading Quran or Bible, etc.), talking to family or friends, do nothing, or others (Students were asked to write the method used).

2.4. Data analysis

Statistical Package for the Social Sciences Software (SPSS, version 23.0) was used for data analysis. Descriptive statistics were used to identify demographic characteristics of the sample, and to calculate the scores and ranges of the instruments used in this study. Bivariate correlation analysis was used to create a correlation matrix. Hierarchical multiple regression analysis was used to predict the effect of the TPB concepts on help-seeking intentions, and the effect of adding other predictors such as depression level and depression literacy level. The first regression step included three predictors: ATTHS, SN, and PBC. The second step tested the effect of adding depression level. Finally, depression literacy level was added, so that the third regression step included five predictors.

3. Results

The sample consisted of 134 university students with an average age of 20.2 years old (SD = 1.6). One hundred and twenty-five students were unemployed and single. Only 6 (4.5%) students reported having chronic illnesses, while 128 (95.5%) never had a visit to a psychiatrist nor a psychological consultation. Also, 57 (42.5%) students reported psychological stress during the previous 2 months. The death of a family member or friend (N = 21, 36.8%) or poor academic performance (N = 12, 21.1%) were the two most common causes of stress. (Table 1)

Students were asked to report their preferred help-seeking behavior when they suffer a psychological stress. The results showed that religious practices (praying and reading the Quran) were the preferred behavior by 95 (76%) students, followed by talking with family and friends (N = 56, 44.8%). Only 17 (13.6%) students reported that seeking help of MHS is the preferred option for them.

Table 1. Demographic characteristics (N = 134)

Variable	Category	Frequency (%)
Gender	Female	85 (63.4)
	Male	49 (36.6)
Housing	Off-campus with family	122 (91.0)
	Off-campus with friends	5 (3.7)
	Off-campus alone	4 (3.0)
	On-campus	2 (1.5)
Educational level	1 st year	29 (21.6)
	2 nd year	57 (42.5)
	3 rd year	31 (23.1)
	4 th year	8 (6.0)
	5 th year	9 (6.7)
Major of study	Engineering	27 (20.1)
	Translation	17 (12.7)
	Computer Science	16 (11.9)
	General sciences	14 (10.4)
	English	7 (5.2)
	Pharmacy	7 (5.2)
	Languages/linguistics	7 (5.2)
	Applied dental sciences	5 (3.7)
	Other	34 (25.6)

Table 2. Description of study variables (N = 134)

Variable	Mean	SD	Range	Median
ATTHS	22.05	4.29	7–30	23.00
SN	9.43	3.66	3–18	9.00
PBC	13.38	3.16	3–18	13.50
CESD	24.12	11.63	2–53	22.00
D-Lit	8.39	2.57	2–16	8.00
Intention	11.35	4.10	3–18	12.00

ATTHS: Attitudes Toward Help-Seeking behaviors

SN: Subjective Norm

PBC: Perceived behavioral control

CESD: Center for Epidemiological Studies-Depression Scale

D-Lit: Depression Literacy Questionnaire

Students had high positive attitudes toward seeking help of MHS. They had a high control level over their decision to seek help of MHS. However, they reported a relatively low social pressure/approval toward seeking help of MHS (SN mean = 9.43). Results indicated 77 (57.5%) students had mild to moderate levels of depression (CESD mean = 24.12, SD = 11.63). Depression literacy scores were very low (mean = 8.39, SD = 2.57). Finally, students reported having a relatively positive but weak intention to seek help of MHS. (Table 2)

3.1. Regression analysis

The first step before running regression analysis was to look at the correlation matrix between the concepts of interest (Table 3). Help-seeking intention of MHS was significantly and positively correlated with ATTHS ($r = 0.386$), SN ($r = 0.278$), and PBC ($r = 0.263$). No

Table 3. Correlation matrix of the major concepts in the study (N = 134)

Concepts	ATTHS	SN	PBC	CESD	D-Lit
SN	0.222**				
PBC	0.040	0.175*			
CESD	0.150	-0.157	-0.041		
D-Lit	0.062	0.065	-0.070	0.034	
Help-seeking intention	0.386***	0.278**	0.263**	0.168	0.078

*<0.05 **<0.01 ***<0.001

ATTHS: Attitudes Toward Help-Seeking behaviors

SN: Subjective Norm

PBC: Perceived behavioral control

CESD: Center for Epidemiological Studies-Depression Scale

D-Lit: Depression Literacy Questionnaire

significant correlation was found between help-seeking intention of MHS and depression level ($r = 0.168$) or depression literacy level ($r = 0.078$). (Table 3)

Hierarchical regression model was created with three steps. All regression steps were statistically significant ($p < 0.001$), and all predictors had a significant independent effect on students' intention except depression literacy level in the third step. In all steps, ATTHS was the strongest predictor of students' intention, followed by PBC and SN. The first step, which included only the three original factors of the TPB, accounted for 23.5% of explained variance. The second step, which included depression level as a fourth predictor, showed 26% of explained variance. The R^2 increased significantly in the second step (R^2 change = 0.025, $p = 0.04$). Depression level had a significant effect on students' intention ($\beta = 0.162$), but this effect was smaller than SN ($\beta = 0.196$) and PBC ($\beta = 0.223$). The third step, which included depression literacy level as a fifth predictor, showed 26.3% of explained variance. This minor increase in the R^2 of the third step was

Table 4. Hierarchical regression of "students' intention to seek hel" (N = 134)

Step	β	R^2	t	p	F	R^2 change	p
1 ATTHS	0.341***	0.235	4.331	0.000	13.325***	0.235	0.000
SN	0.164*		2.053	0.042			
PBC	0.221**		2.835	0.005			
2 ATTHS	0.309***	0.260	3.906	0.000	11.320***	0.025*	0.040
SN	0.196*		2.439	0.016			
PBC	0.223**		2.901	0.004			
CESD	0.162*		2.072	0.040			
3 ATTHS	0.307***	0.263	3.866	0.000	9.138***	0.003	0.454
SN	0.192*		2.374	0.019			
PBC	0.228**		2.948	0.004			
CESD	0.160*		2.040	0.043			
D-lit	0.057		0.752	0.454			

*<0.05 **<0.01 ***<0.001

ATTHS: Attitudes Toward Help-Seeking behaviors

SN: Subjective Norm

PBC: Perceived behavioral control

CESD: Center for Epidemiological Studies-Depression Scale

D-Lit: Depression Literacy Questionnaire

not significant (R^2 change = 0.003, $p = 0.454$), and is related to the small, non-significant effect of the depression literacy level on students' intention. (Table 4)

4. Discussion

The results of this study indicate that Jordanian university students do not prefer to seek help of MHS during psychological stress. This reflects their positive weak intentions to seek help of MHS. These results are consistent with other research studies conducted in Jordan and Arab countries (Al Ali et al., 2017; Al-Krenawi et al., 2009; Aloud & Rathur, 2009; Lesheman, Haj-Yahia, & Guterman, 2015; Rayan & Jaradat, 2016; Youssef & Deane, 2006). This could be explained by the collectivist nature of Arab communities which have a high self and community stigma toward mental illness as well as negative attitudes to MHS (Al Ali et al., 2017; Al-Krenawi et al., 2009; Al Matarneh & Altrawneh, 2014; Aloud & Rathur, 2009; Ismayilova et al., 2013; Rayan & Jaradat, 2016; Zawawi & Hamaideh, 2009). This is consistent with the results of this study where students had a very low score of social approval toward seeking help of MHS. Consequently, their behaviors may not resolve the psychological distress completely. Rather, underutilization of MHS will exacerbate their symptoms leading to more severe complications. Approximately 42.5% of students experienced a stressful situation during the previous 2 months, and 57.7% of them suffered from mild to moderate depression. Researchers previously reported similar results regarding depression rate (50%) among university students (Al Matarneh & Altrawneh, 2014; Ismayilova et al., 2013; Rayan & Jaradat, 2016; Zawawi & Hamaideh, 2009). The high prevalence rate of depression indicates the amount of underutilization of, and the importance of MHS. Surprisingly, students had a very low level of knowledge about depression, although more than half of them were experiencing it at the time of the study. This score was almost equal to the score of a sample of Saudi adolescents (Darraj et al., 2016).

The first regression step significantly predicted students' intention to seek help through MHS, accounting for 23.5% of explained variance. This step included the predictors that exist in the TPB. This is consistent with previous studies that supported the strong predictive power of the TPB in predicting behaviors including help-seeking behaviors of MHS (Aldalaykeh, 2016; Compton & Esterberg, 2005; Mo & Mak, 2009; Schomerus, Matschinger, & Angermeyer, 2009; Skogstad et al., 2006; Woods, 2013). In all steps, ATTHS was the strongest predictor of students' intention to seek help. This is consistent with previous research studies (Aldalaykeh, 2016; Bayer & Peay, 1997; Mo & Mak, 2009; Schomerus et al., 2009). ATTHS could be targeted by mental health professionals to increase awareness and show the effectiveness of MHS to university students, possibly increasing utilization of MHS. SN was a significant predictor of students' intention in all steps, and ranked third in terms of strength of prediction. This is consistent with studies that were conducted in Eastern or Arabic countries (Mak & Davis, 2014; Mo & Mak, 2009). SN is strongly affected by the type of culture, and thus, in collectivist cultures such as Chinese and Arabic cultures, behaviors are highly affected by social pressure (Al Ali et al., 2017; Mak & Davis, 2014; Mo & Mak, 2009; Rayan & Jaradat, 2016). PBC was also a significant predictor of students' intention in all steps, and ranked second in terms of strength of prediction. PBC is affected by the availability and accessibility of MHS as well as the voluntary control over making a decision to seek help through MHS. In Jordan, there are limited MHS available, and people's decisions are affected by their family members and friends. Jordanian universities lack psychological services for their students. This may explain the significant effect of PBC on students' intentions. Mak and Davis (2014) investigated the effect of the same variables studied here on help-seeking behavior of MHS in Macao, and they found that PBC was the strongest predictor. They explained that this could be related to the scarcity of MHS in Macao (Mak & Davis, 2014).

The second regression step included depression level as a fourth predictor, and it was statistically significant. Our findings were consistent with previous research studies that showed significant association between symptom severity and help-seeking behaviors (Thompson, Hunt, & Issakidis, 2004). Screening for mental illnesses would help diagnose students and encourage them to seek help of MHS. The third regression step included five predictors by adding depression

literacy level. This step was statistically significant, and slightly improved the explained variance. Depression literacy level was not a significant predictor, and it could be related to low literacy level among students. This is inconsistent with previous studies that showed the positive effect of improved literacy level on help-seeking behaviors (Conrad et al., 2009; Rickwood, Cavanagh, Curtis, & Sakrouge, 2004). Low Literacy score may indicate the need for awareness campaigns about mental illnesses.

Limitations of this study include using a convenience sampling method, and thus, generalizability of the findings is limited only to those who have similar characteristics. Another limitation is the use of a cross-sectional design, which does not support causality. However, one of the strengths of this study is that all tested hypotheses are based on well-established theories, which may help establish some bases of causality, especially with the use of multiple regression. Finally, the measurement of students' intention instead of the actual help-seeking behavior is considered another limitation. Future studies should consider the use of longitudinal design and measure the actual behavior.

5. Conclusion

The results showed that religious practices were the preferred behavior by most students. Only 17 students reported seeking help of MHS as a possible option during psychological distress. The TPB is one of the best theories in predicting behaviors, and its concepts significantly predicted students' intention to seek help of MHS. ATTHS was the strongest predictor of students' intention in all regression steps, followed by PBC and SN. Conducting campaigns in Jordanian universities to increase awareness about mental illnesses and the effectiveness of MHS may improve students' literacy levels about these illnesses and may improve the utilization rate of MHS.

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Disclosure

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