

## CHAPTER FOUR

### Results

This study sought to document the attitudes toward seeking professional psychological help among KU students and to determine the contribution of the FFSS as a predictor of these attitudes beyond that provided by predictors used in other studies. The statistical analysis results are presented in four sections: (1) descriptive statistics of the sample in forms of demographic variables; (2) descriptive statistics and reliability of the scales and subscales used in the study; (3) findings regarding the study hypotheses; and (4) regression analyses results.

#### Sample Profile

Eight hundred questionnaires were distributed to students enrolled in 46 classes at KU. Of the 800 questionnaires distributed, 673 were returned but many of these had missing data. A total of 529 completed questionnaires were used in the analysis for this study. The greatest loss of data came from classes wherein students were directed to complete the questionnaires at home. As indicated in Table 1, the majority of the participants were single (77.1 %), female (79 %), and natives of Kuwait (91.3 %). The sample was approximately evenly distributed across the years in college. The majority of the participants were enrolled in the college of education (36.5%), followed by the college of arts and social sciences (24%), and the college of sciences (23.8%). The mean age of participants was 20.7 (SD = 2.0), ranging from 17 to 36 years of age.

Table 1:

Participant Demographics

Variable	<u>N</u>	<u>(%)</u>
Gender		
Male	111	(21.0)
Female	418	(79.0)
Nationality		
Kuwaiti	483	(91.3)
Non-Kuwaiti	46	(8.7)
Saudi Arabia	20	
Egypt	8	
Bahrain	4	
Qatar	4	
Oman	4	
Jordan	3	
Singapore, Indonesia, Congo	3	
Marital Status		
Single	408	(77.1)
Married	114	(21.6)
Divorced*	7	(1.3)
College Major		
Education	193	(36.5)
Arts & Social Sciences	127	(24)
Islamic Studies	6	(1.1)
Sciences	126	(23.8)
Engineering	44	(8.3)
Medicine	5	(0.9)
Business	25	(4.7)
Other	2	(0.4)
Psychology-Related Major		
No	396	(25.1)
Yes	133	(74.9)
Year in College		
Freshman	116	(21.9)
Sophomore	127	(24.0)
Junior	130	(24.6)
Senior	116	(21.9)
> 5 Years	40	(7.6)

Note. \* Due to the small size of this category, it was not included in the regression analysis.

### Family Profile

Table 2 summarizes information pertaining to participants' families, including number of immediate family members, monthly family income, education level, and employment status.

The majority of participants reported a family of 6 to 9 immediate members, with 80% of participants living with their parents (n = 423). Majority of the participants' parents were married (80.7% of fathers and 81.9% of mothers) and most of the participants' fathers (64.6%) and mothers (74.3%) had the equivalence of a high school education or less. Thus, most of the participants were the first generation of their families to attend college. The participants reported that 97% (n = 513) of their fathers were employed and 33.6% (n = 178) of their mothers were employed. Monthly income was calculated by converting the Kuwaiti Dinar into U.S. Dollars (KD 1.00 = \$3.09). Sixty-five percent of participants reported their monthly family income to be between \$1501 and \$3500.

Table 2:

### Participants' Family Profiles

Variable	N	(%)
Family Size		
1-5	123	(23.2)
6-9	241	(45.5)
10-13	126	(23.8)
14-17	14	(2.6)
18-21	13	(2.4)
> 21	12	(2.3)
Monthly Family Income (\$US)		
< \$1500	72	(13.6)
\$1501- \$2000	113	(21.4)
\$2001- \$3500	235	(43.6)
\$3501- \$4000	53	(10.0)
> \$4001	56	(10.6)

Table 2 (Continued)

Variable	N	(%)	
Parents' Education Level			
Father	< High school	246	(46.3)
	High school	97	(18.3)
	2 year college	64	(12.1)
	Bachelor's	96	(18.1)
	Master's	14	(2.6)
	Doctorate	11	(2.1)
	Other	2	(0.4)
Mother	< High school	318	(57.3)
	High school	90	(17)
	2 year college	62	(11.7)
	Bachelor's	62	(11.7)
	Master's	7	(1.3)
Parents' Marital Status			
Father	Married	427	(80.7)
	Divorced	17	(3.2)
	Remarried	5	(.9)
	Widowed	21	(4)
	Deceased	59	(11.2)
Mother	Married	433	(81.9)
	Divorced	31	(5.9)
	Remarried	47	(8.9)
	Widowed	9	(1.7)
	Deceased	9	(1.7)
Parents' Employment Status			
Father	Unemployed	16	(3.0)
	Employed	513	(97.0)
Mother	Unemployed	351	(66.4)
	Employed	178	(33.6)
Living with parents			
	Yes	423	(80)
	No	106	(20)

Table 3 provides information about participants' housing type (i.e., government, private, rental) and residence location (i.e., governorate). The residence location of participants was divided into six categories based on the governorate in which the participants live. For the purpose of the study, the terms urban and suburban were used for classification. The classification was primarily based on how close these locations are to the center of Kuwait City. A cut-off of ten kilometers (6.25 mile) was used when making the decision. The term urban was used to indicate those participants living in the Capital and Hawally locations and the term suburban was used to indicate those participants living in other locations.

Table 3:  
Housing Type and Location

Variable	N	(%)
Type		
Government	261	(49.3)
Private	223	(42.2)
Rent*	45	(8.5)
Location		
Capital	110	(20.8)
Hawally	115	(21.7)
Farwaneyah	104	(19.7)
Jahra	77	(14.6)
Ahmady	91	(17.2)
Mubarak Alkabair	32	(6.0)
Urban (Capital & Hawally)	225	(42.5)
Suburban (Other)	304	(57.5)

Note. \* Due to the small size of this category, it was not included in the regression analysis.

#### Previous Counseling Experience

Table 4 provides information about participants' counseling history. Of the 529 participants, only 39 (7.4%) had received counseling, 33 (7.9%) of the female participants (n =

418) and 6 (5.4%) of the male participants (n =111). Only 7 (17.9%) of the 39 participants indicated that they were still receiving counseling at the time of the survey.

Table 4:

Participants' Counseling Experience

Variable	Males		Females		Total	
	N	(%)	N	(%)	N	(%)
Previous Counseling						
No	105	(94.6)	385	(92.1)	490	(92.6)
Yes	6	(5.4)	33	(7.9)	39	(7.4)
Reason for Counseling						
Personal	2	(33.3)	13	(39.4)	15	(38.5)
Family	2	(33.3)	13	(39.4)	15	(38.5)
Marital	---	---	3	(9)	3	(7.7)
Academic	4	(66.7)	10	(30.3)	14	(35.9)
Social	1	(16.7)	6	(18.2)	7	(17.9)
Psychological	5	(83.3)	20	(60.6)	25	(64.1)
Drugs	---	---	1	(3)	1	(2.5)
Other	---	---	2	(6)	2	(5.1)
Currently Receiving Counseling						
No	4	(66.7)	28	(84.9)	32	(82.1)
Yes	2	(33.3)	5	(15.2)	7	(17.9)
Total	111	(21)	418	(79)	529	(100)

Preference in Psychological Help Source

Participants were asked to identify persons they would most likely turn to if in need of psychological help. They were given a list of possible sources and asked to identify their top five preferences. Table 5 provides a count of the number of times each person was listed among the top five choices. A separate reporting is provided for single and married respondents in as much as spouses are not a possibility for single students. As shown in Table 5 below, both single and married participants ranked their mothers and friends as top choices with counselors and teachers trailing the pack.

Table 5:

Preferences for Psychological Help

Source	Single Participants (n = 408)		Source	Married Participants (n = 114)	
	%	Rank		%	Rank
Mother	84.6	1	Mother	76	1
Friend	82	2	Friend	73.5	2
Sister	74.8	3	Sister	72.8	3
Father	53.5	4	Spouse	67.8	4
Brother	51.7	5	Father	43.7	5
Relative	38.9	6	Religious Leader	42.2	6
Religious Leader	36.2	7	Brother	42.1	7
Counselor	32.4	8	Relative	33.1	8
Teacher	17.3	9	Counselor	29.8	9
			Teacher	14.9	10

Participant Demographics and Preference for Counseling

The above preference ratings were cross-tabulated with selected demographic variables with the following results. A nonparametric Kruskal-Wallis test indicated that a significantly higher percentage of participants with previous counseling experience prefer to seek help from a counselor when compared to participants who have not had previous counseling experience  $\chi^2(1, 529) = 26.25, p < 0.05$ . Gender also impacted participants' preferences for psychological help. Male participants, when compared to females participants, prefer to seek help from their fathers,  $\chi^2(1, 528) = 7.21, p < 0.05$ , and from their brothers  $\chi^2 = (1, 528) = 6.8, p < 0.05$ . Female participants, when compared to male participants, prefer to seek help from their sisters  $\chi^2(1, 528) = 25.31, p < 0.05$ .

### Reliability of Scales

Table 6 provides descriptive data, intercorrelations, and reliability coefficients of the scales and subscales used in the study. A Cronbach's alpha of 0.82 was calculated for the total scores on the Arabic version of the 29-item ATSPPHS. The reliability of the ATSPPHS subscales ranged from 0.35 to 0.72, with the Need (0.35) and Openness (0.47) subscales having the lowest coefficients. Item-total statistics analysis revealed no negative item-total correlation values for any of the scale items.

An overall Cronbach's alpha of 0.86 was calculated for the Arabic version of the 22-item FFSS scale. The FFSS subscales reliability coefficients were 0.80 (Family), 0.67 (Societal), and 0.55 (Friends). Item-total statistics analysis revealed no negative item-total correlations values for any of the scale items.

Cronbach's alphas for the Arabic versions of the OTUSR and LSE were 0.72 and 0.82, respectively. Although the OTUSRS reliability was judged acceptable, items 3, 12, and 15 weakened the total reliability of the scale, as evidence by low item-total correlations for these items, ranging in size from 0.08 to 0.13.



Table 6:

Descriptive Data, Reliability Coefficients and Correlations Matrix of Scales (N = 529)

Measure	1	2	3	4	5	6	7	8	9	10	11
Total Scales:	1.00										
1. ATSPPH											
2. FFSS	.70**	1.00									
3. OTUSRS	.19**	.31**	1.00								
4. LSE	.19**	.03	-.09*	1.00							
ATSPPHS											
Subscales:											
5. Need	.68**	.43**	.080	.18**	1.00						
6. Stigma	.75**	.65**	.14**	.12**	.27**	1.00					
7. Openness	.71**	.45**	.24**	.16**	.36**	.41**	1.00				
8. Confidence	.85**	.55**	.12**	.12**	.49**	.55**	.42**	1.00			
FFSS Subscales:											
9. Family	.66**	.93**	.28**	.018	.42**	.60**	.43**	.54**	1.00		
10. Friends	.49**	.66**	.19**	.074**	.29**	.49**	.32**	.37**	.46**	1.00	
11. Societal	.52**	.83**	.28**	.008	.31**	.53**	.32**	.40**	.64**	.46**	1.00
Number of Items	29	22	20	18	8	5	7	9	12	6	4
<u>M</u>	42.35	31.46	32.87	21.81	10.72	7.78	9.54	14.30	17.80	8.05	5.61
<u>SD</u>	9.88	9.34	6.36	9.67	2.71	3.19	3.07	4.03	3.14	3.15	2.13
$\alpha$	.82	.86	.72	.82	.35	.73	.47	.72	.80	.67	.55

Note. \*  $p < 0.05$ .

\*\*  $p < 0.01$ .

### FFSS Validity

Numerous colleagues and professionals in the field of counseling and psychology, as well as pilot study participants, were asked to assess the content validity of the FFSS scale items. After multiple revisions, dialogue, and feedback, their responses indicated favorable content validity. The FFSS appears to measure participants' family, friends, and societal support system's views on the utilization of professional psychological services.

The means, standard deviations, reliability coefficients, and correlations matrix of the four scales are presented in Table 6. Because participants' family, friends, and societal support system's views on counseling should be related to, but not identical to participants' attitudes toward seeking professional psychological help, a positive correlation between the ATSPPHS and the FFSS was predicted. As anticipated, the FFSS correlates positively with the ATSPPHS ( $r = 0.7$ ). The OTUSRS and the LSE both have a lower correlation with ATSPPHS than the FFSS ( $r = 0.19$  for each).

An additional assessment of the FFSS' construct validity was conducted by investigating the intercorrelations between the FFSS subscales and the ATSPPHS subscales, revealing moderate correlations ranging in size from  $r = 0.29$ ,  $p < 0.01$ , to  $r = 0.60$ ,  $p < .01$ . The correlation between the FFSS friends subscale and the ATSPPHS need subscale ( $r = 0.29$ ,  $p < .01$ ) demonstrates an acceptable level of discriminant validity, indicating that these two subscales measure different dimensions. Because both the FFSS and the OTUSRS measure different aspects of social support, an estimate of FFSS construct validity was obtained by calculating the correlation between these two scales. The positive correlation between these scales ( $r = 0.19$ ,  $p < 0.01$ ) suggests additional evidence of FFSS construct validity. The intercorrelations between the FFSS subscales and OTUSRS were also small enough to claim further evidence of discriminant validity of the FFSS, ranging in size from  $0.19$ ,  $p < 0.01$ , and  $0.28$ ,  $p < 0.01$ . Further analysis

indicates that the FFSS was not correlated with the LSE ( $r = .03$ ,  $p = .488$ ), thereby providing additional evidence of discriminant validity.

The findings reported in Table 6 also demonstrated an acceptable level of convergent validity between the FFSS societal subscale and the FFSS friends subscale and the ATSPPHS stigma subscale. These FFSS two subscales correlated positively with the ATSPPHS stigma subscale,  $0.53$ ,  $p < 0.001$ , and  $0.49$ ,  $p < 0.001$ , respectively. Further convergent validity was found between the FFSS family subscale and the ATSPPHS confidence subscale ( $r = 0.54$ ,  $p = 0.000$ ).

Another method of assessing the construct validity of the FFSS was to look at the intercorrelations among the FFSS subscales. The correlations among the FFSS subscales were higher than anticipated, ranging in size from  $0.46$ ,  $p < 0.01$ , and  $0.64$ ,  $p < 0.01$ . These relatively high coefficients detract from the discriminant validity of these scales as measures of distinct constructs. However, our interest was primarily focused on the ability of the total scores to predict ATSPPHS total scores. In summary, participants with families and societal support systems that condone seeking professional psychological help are the participants who express favorable and positive attitudes toward seeking psychological services, including the likelihood of seeking counseling if needed. Therefore, the FFSS validity data indicated that the FFSS subscales measured highly interrelated components and supported the use of the FFSS total score rather than subscales scores, in further analyses.

#### Finding Regarding the Study Hypotheses

Hypothesis 1: Kuwait University students (KU students) tend to have negative attitudes toward seeking professional psychological help as measured by the ATSPPHS.

Table 7 compares the ATSPPHS mean and standard deviation obtained in the current study to those reported in previous studies. A comparison of these means suggests that KU

students have less favorable attitudes toward seeking professional psychological help than other study groups.

Table 7:

ATSPPHS Means and Standard Deviations: Comparison of Current and Previous Studies

Study/Sample	Total		Males		Females	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Current Study Kuwaiti students ( <u>N</u> = 529)	42.3	9.9	40.2	10.16	42.9	9.73
Fischer & Turner (1970) US students ( <u>N</u> = 458)	59.6	11.6	56.1	11.8	63.2	11.4
Kelly & Achter (1995) US students ( <u>N</u> = 256)	54.6	13.4	NR <sup>1</sup>	NR	NR	NR
Dadfar & Friedlander (1982) International students ( <u>N</u> = 172)	50.4	12.5	48.9	12.6	52.1	12.3
Atkinson & Gim (1989) Asian-American ( <u>N</u> = 557)	48.8	10.4	NR	NR	NR	NR
Komiya & Eells (2001)* International students ( <u>N</u> = 293)	46.4	13.42	NR	NR	NR	NR
Tata & Leong (1994) Chinese-Americans ( <u>N</u> = 219)	45.9	7.9	NR	NR	NR	NR
Flum (1998) Asian International ( <u>N</u> = 115)	45.2	8.5	43.6	6.6	46.9	8.56

Note. NR<sup>1</sup>: Not reported by the study author(s).

\* Based on adjustment applied to a 10-item scale as measured by the shortened form of the ATSPPHS (Fischer & Farina, 1995).

Hypothesis 2: Students who have greater family, friends, and societal support for seeking professional psychological help as measured by FFSS are more likely to have positive attitudes toward seeking professional psychological help.

It was hypothesized that receiving more family, friends, and societal support for seeking professional psychological help would result in more positive attitudes toward seeking professional psychological help. As expected, the Pearson correlation coefficient between total scores on these two measures, FFSS and ATSPPHS, was positive and high  $r = 0.70$  (see Table 6). Cohen and Cohen (1983) and Pedhazur and Schmelkin (1991) suggested using a correction for attenuation to estimate the correlation between true scores, controlling for the less than perfect reliability of the score sets. Accordingly, given that the correlation between these two measures was 0.70, it is estimated that, with perfectly reliable measures, the correlation between these variables would be 0.83. This indicates that the relationships between ATSPPHS and FFSS supported the hypothesis that individuals whose family and friends were supportive of seeking professional psychological help were more likely to have positive attitudes toward seeking professional psychological help than those whose family and friends were not supportive.

Hypothesis 3: Students who have high scores on ATSPPHS are more likely to have high scores on Life Stress Events scale (LSE).

A modest but statistically significant correlation was found between ATSPPHS scores and LSE scores,  $r = 0.19$ ,  $p < 0.01$  (see Table 6). This indicates that those students who experienced more life stress events are somewhat more likely to express positive attitudes toward seeking professional psychological help than those who reported fewer life stress events. However, the coefficient of determination is 0.036 indicating that only 3.6% of the variance is shared in common. Previous research has also shown a positive correlation between life stress events and attitudes toward seeking professional psychological help (e.g., Sherbourne, 1988).

Hypothesis 4: Students who have high scores on the Orientation Toward the Utilization of Social Resources Scale (OTUSRS) are more likely to have low scores on ATSPPHS.

It was hypothesized that utilization of social support would lessen the willingness to seek professional psychological help. Therefore, the greater the utilization of social support, the less willing participants might be to seek professional psychological help. This hypothesis was not supported. As shown in Table 6, the correlation between OTUSRS and ATSPPHS was positive and statistically significant,  $r = 0.19$ ,  $p < 0.01$ , indicating a tendency for students who reported more utilization of their social network to report more favorable attitudes toward seeking professional psychological help.

Hypothesis 5: Students who have high scores on OTUSRS are more likely to have low scores on LSE.

It was hypothesized that participants' utilization of social support buffers the affect of stressful life events. If this were true, individuals who report greater utilization of their social resources may also report fewer life stress events. A small but statistically significant negative correlation between the OTUSRS and LSE supported this hypothesis ( $r = -0.09$ ,  $p < 0.05$  (Table 6)).

Hypothesis 6: Students who had received previous professional psychological help are more likely to report positive attitudes toward seeking professional psychological help than those who had not received previous professional psychological help.

Only 39 (7.3%) out of the 529 participants received counseling. The ATSPPHS mean score for those who had received previous counseling experience was statistically higher ( $M = 47.69$ ,  $SD = 10.02$ ) than those who had not received previous counseling experience ( $M = 41.93$ ,  $SD = 9.75$ ),  $t(527) = -3.53$ ,  $p < 0.001$ . This result is similar to those found in previous studies (e.g., Fischer & Turner, 1970; Solberg et al., 1994).

Hypothesis 7: Female students would have higher mean scores than males on the ATSPPHS.

Female students had significantly higher total scores on the ATSPPHS ( $M = 42.93$ ,  $SD = 9.73$ ) than did male students ( $M = 40.18$ ,  $SD = 10.16$ ),  $t(527) = -2.63$ ,  $p < 0.05$ . This result indicates that female participants were more likely to express positive attitudes toward seeking psychological help from professionals than their male counterparts. These results replicate findings of previous studies that have shown females tend to express more positive attitudes toward seeking psychological help from professionals than do males (Bringle & Byers, 1997; Fischer & Turner, 1970).

Hypothesis 8: Female students would have higher mean scores than males on the four subscales of the ATSPPHS.

There was a statistically significant difference between males and females for two of the ATSPPHS subscales. Females reported more recognition of need for psychotherapeutic help ( $M = 10.90$ ,  $SD = 2.74$ ) than males ( $M = 10.07$ ,  $SD = 2.47$ ),  $t(527) = -2.87$ ,  $p = 0.004$  as well as more confidence in mental health practitioners than males ( $M = 14.51$ ,  $SD = 3.91$  for female &  $M = 13.50$ ,  $SD = 4.35$  for males),  $t(527) = -2.34$ ,  $p = 0.017$ . Male ( $M = 7.37$ ,  $SD = 3.47$ ) and female ( $M = 7.90$ ,  $SD = 3.11$ ) KU students did not statistically differ in the ATSPPHS stigma tolerance subscale,  $t(527) = -1.45$ ,  $p = 0.148$ , nor in the ATSPPHS interpersonal openness subscale,  $t(527) = -1.16$ ,  $p = 0.246$  ( $M = 9.24$ ,  $SD = 3.27$  for males &  $M = 9.62$ ,  $SD = 3.02$  for females).

Hypothesis 9: Students who major or minor in psychology would have higher mean scores than those who are not major or minor in psychology on the ATSPPHS.

Participants who major or minor in psychology ( $M = 44.01$ ,  $SD = 9.46$ ) reported more positive attitudes toward seeking professional psychological help than those in other majors ( $M = 41.80$ ,  $SD = 9.96$ ),  $t(527) = -2.24$ ,  $p = 0.025$ .

### Ancillary Hypotheses

The ancillary hypotheses stated that there would be statistically significant differences on the ATSPPHS, FFSS, OTUSRS, and LSE based on the following demographics:

A. Marital status of participants: The findings indicate that single and married participants differ statistically on the ATSPPH need subscale scores,  $t(527) = -2.24$ ,  $p = 0.026$ , indicating that married participants ( $M = 43.68$ ,  $SD = 9.55$ ) expressed more need to seek professional psychological help than single participants ( $M = 41.96$ ,  $SD = 9.95$ ). The findings also indicate that they differ statistically in their scores on the LSE,  $t(527) = -2.45$ ,  $p = 0.015$ , indicating that married participants ( $M = 23.69$ ,  $SD = 9.79$ ) report more life stress events than single participants ( $M = 21.25$ ,  $SD = 9.58$ ).

B. Geographical residence location of participants: Urban residents differed statistically from suburban residents on their ATSHHPS total scale scores,  $t(2, 527) = -275$ ,  $p = 0.006$ , meaning urban residents ( $M = 43.72$ ,  $SD = 9.42$ ) expressed more willingness to seek professional psychological help than suburban residents ( $M = 41.34$ ,  $SD = 10.01$ ). Urban residents also differed statistically on the stigma and openness ATSPPHS subscales, expressing more stigma tolerance ( $M = 8.32$ ,  $SD = 3.19$  for Urbans &  $M = 7.38$ ,  $SD = 3.14$  for Suburbans) and more interpersonal openness ( $M = 9.92$ ,  $SD = 2.97$  for Urbans &  $M = 9.26$ ,  $SD = 3.12$  for Suburbans) associated with seeking professional help than suburban residents,  $t(2, 527) = -3.36$ ,  $p = 0.001$ , and  $t(2, 527) = -2.48$ ,  $p = 0.013$ , respectively. Furthermore, they differed statistically on their FFSS scores; urban residents ( $M = 32.98$ ,  $SD = 8.97$ ) reported receiving more family and societal support for seeking professional psychological services than suburban residents ( $M = 30.34$ ,  $SD = 9.46$ ),  $t(527) = -3.23$ ,  $p = 0.001$ . In addition, they differed statistically on three subscales of the FFSS. Urban residents reported receiving more family support ( $M = 18.71$ ,  $SD = 5.55$  for Urbans &  $M = 17.12$ ,  $SD = 5.71$  for Suburbans),  $t(527) = -3.20$ ,  $p = 0.001$ , more societal



support ( $\underline{M} = 8.37$ ,  $\underline{SD} = 2.99$  for Urbans &  $\underline{M} = 7.81$ ,  $\underline{SD} = 3.24$  for Suburbans),  $t(527) = -2.03$ ,  $p = 0.043$ , and more friends support ( $\underline{M} = 5.89$ ,  $\underline{SD} = 2.15$  for Urbans &  $\underline{M} = 5.41$ ,  $\underline{SD} = 2.10$  for Suburbans),  $t(527) = -2.60$ ,  $p = 0.010$ , for seeking professional help than suburban residents. Lastly, urban residents differ statistically from their suburban counterparts on their OTUSRS scores ( $\underline{M} = 33.5$ ,  $\underline{SD} = 5.74$ ), expressing more utilization of their social support network than suburban residents ( $\underline{M} = 32.40$ ,  $\underline{SD} = 6.75$ ),  $t(527) = -2.00$ ,  $p = 0.045$ .

C. Participant Housing Types: The findings indicate that participants who live in governmental housing and those who live in private housing differed only in their ATSPPHS stigma subscale scores,  $t(2, 527) = -2.33$ ,  $p = 0.02$ . Those living in private housing ( $\underline{M} = 8.10$ ,  $\underline{SD} = 3.27$ ) expressed more stigma tolerance associated with attitudes toward seeking professional psychological help than those living in government housing ( $\underline{M} = 7.45$ ,  $\underline{SD} = 3.08$ ). No other statistically significant differences were found between these groups in other scales.

D. Employment status of participants' parents: When comparing the employment status of participants' parents, statistical analysis did not reveal any statistically significant differences between participants whose fathers were employed and those whose fathers were unemployed on any of the scales used in this study. However, they differed statistically on their scores on the ATSPPHS confidence on mental health practitioner subscale. Participants with employed fathers ( $\underline{M} = 14.36$ ,  $\underline{SD} = 3.98$ ) expressed more confidence in mental health practitioners than those with unemployed fathers ( $\underline{M} = 12.25$ ,  $\underline{SD} = 4.96$ ),  $t(527) = -2.25$ ,  $p = 0.038$ . Further findings indicated that participants with employed mothers differed statistically on the ATSPPHS need subscale ( $\underline{M} = 11.09$ ,  $\underline{SD} = 2.60$  for employed mothers &  $\underline{M} = 10.53$ ,  $\underline{SD} = 2.74$  for unemployed mothers),  $t(527) = -2.25$ ,  $p = 0.025$ , and on the FFSS family subscale ( $\underline{M} = 18.54$ ,  $\underline{SD} = 5.37$  for employed mothers &  $\underline{M} = 17.42$ ,  $\underline{SD} = 5.81$  for unemployed mothers),  $t(527) = -2.13$ ,  $p = 0.033$ . Participants

with employed mothers expressed more need for professional psychological help and received more family support to seek such professional help.

E. Educational level of participants' parents: Father's educational level was positively correlated with the FFSS scale ( $r = 0.09$ ,  $p < 0.05$ ), the OTUSRS ( $r = 0.09$ ,  $p < 0.05$ ), and FFSS family subscale ( $r = 0.10$ ,  $p < 0.05$ ). Therefore, as fathers' education levels increase, family, friends, and societal support for seeking professional psychological help and the social network orientation likewise increase. A negative correlation between fathers' education levels and the LSE scale scores was observed ( $r = -0.13$ ,  $p < 0.01$ ) indicating that as fathers' education levels increase, stressful life events decrease.

Mothers' education levels were found to be significantly associated with scores on most of the study scales, with the exception of the OTUSRS. The correlation between mothers' education levels and the ATSPPHS scale was statistically significant, ( $r = 0.09$ ,  $p < 0.05$ ), indicating that as mothers' education levels increase, positive attitudes toward seeking professional psychological help also increase. The same trend can be seen with the ATSPPHS stigma tolerance subscale ( $r = 0.11$ ,  $p < 0.05$ ), the FFSS total scale ( $r = 0.14$ ,  $p < 0.01$ ), and FFSS family support subscale for seeking professional psychological help ( $r = 0.16$ ,  $p < 0.01$ ). A negative correlation between mothers' education levels and the LSE scale scores was observed ( $r = -0.11$ ,  $p < 0.05$ ), indicating that as mothers' education levels increase, stressful life events decrease.

F. Family income: Family income was significantly associated with all the study's major scales with the exception of the ATSPPHS (FFSS -  $r = 0.12$ ,  $p < 0.01$ , the OTUSRS -  $r = 0.11$ ,  $p < 0.05$ , and the LSE -  $r = -0.12$ ,  $p < 0.01$ ). This indicates that as family income increases, so does family and societal support for seeking professional psychological help as well as utilization of social network support. As family income increases, stressful life events decrease.

G. Family size: Family size was significantly correlated with the ATSPPHS ( $r = -0.10$ ,  $p < 0.05$ ) and the FFSS ( $r = -0.13$ ,  $p < 0.01$ ) total scales. Family size is also correlated with two ATSPPHS subscales, the stigma tolerance subscale ( $r = -0.13$ ,  $p < 0.01$ ), and the confidence in mental health practitioners subscale ( $r = -0.120$ ,  $p < 0.01$ ). Statistically significant correlations with the FFSS subscales included the family support subscale ( $r = -0.127$ ,  $p < 0.01$ ) and the societal support subscale ( $r = -0.122$ ,  $p < 0.05$ ). These negative correlations indicate an inverse relationship between these scales and family size.

#### Multiple Regression Analysis

A hierarchical regression was conducted to determine the extent to which each of the independent variables contributes to the prediction of the ATSPPHS scores. To do so, blocks of variables were entered into the regression equation as follows:

1. Block One: Demographic variables

Because some of the demographic variables lack theoretical support in predicting attitudes toward seeking professional psychological help for this particular population, forward selection regression analysis was used to select among the variables for this block.

2. Block Two: The OTUSR scale

3. Block Three: The LSE scale

4. Block Four: The FFSS scale and subscales

Two models were used to assess the FFSS in Block Four. In Block 4<sup>a</sup> FFSS total scores were used whereas in Block 4<sup>b</sup>, the total scores were replaced with FFSS subscales. Results of these regression analyses are presented in Table 8.

Table 8:

Summary of Hierarchical Regression Analysis for Variables Predicting KU Students Attitudes  
Toward Seeking Professional Psychological Help (ATSPPHS) (N = 529).

Variable	Block 1		Block 2		Block 3		Block 4 <sup>a</sup>		Block 4 <sup>b</sup>	
	$\beta$	p	$\beta$	p	$\beta$	p	$\beta$	p	$\beta$	p
Previous Counseling Experience (Yes 1)	.147	.001	.137	.001	.106	.011	.075	.015	.079	.010
Residence Location (Urban 1)	.112	.008	.097	.022	.105	.011	.027	.371	.022	.460
Gender (Female 1)	.118	.006	.122	.004	.111	.007	.093	.002	.088	.004
Psychology-related major (Yes 1)	.100	.020	.100	.018	.095	.023	.079	.009	.077	.011
OTUSRS			.178	.000	.196	.000	-.010	.764	-.006	.814
LSE					.186	.000	.149	.000	.146	.000
FFSS Total Scores							.679	.000	-----	-----
FFSS Subscales:										
Family									.500	.000
Friends									.186	.000
Societal									.108	.008
$R^2$	.059		.090		.124		.531		.540	
$\Delta R^2$	.010		.031		.033		.408		.416	

Note. Block 4<sup>a</sup> includes FFSS total scale.

Block 4<sup>b</sup> includes FFSS subscales and does not include the FFSS total in the block.

The regression equation indicated that demographic variables (i.e., Block 1) accounted for only 6% of the variance in ATSPPHS scores,  $F(4, 524) = 8.19, p = 0.000$ , with the highest  $\beta$  weights associated with previous counseling experience ( $\beta = 0.15, p = 0.001$ ), gender ( $\beta = 0.12, p = 0.006$ ), location of residence ( $\beta = 0.11, p = 0.008$ ), and psychology-related major ( $\beta = 0.11, p = 0.020$ ) variables consistent with the means reported for the previously discussed t-tests. Participants with previous counseling experience were more likely to have positive attitudes toward seeking professional psychological help than those without prior counseling experience. Also, females were significantly more likely to have positive attitudes toward seeking psychological help than were males. Participants living in urban areas (compared to suburban areas) and those with psychology-related majors were more likely to have positive attitudes about help-seeking behavior.

The inclusion of OTUSRS scores in Block 2 significantly but moderately increased  $R^2$ , with  $\Delta R^2 = 0.031$ , accounting for an additional 3.1% of the variance,  $F(5, 523) = 10.39, p = 0.000$ . At this point, OTUSRS had the highest  $\beta$  weight of all included predictors ( $\beta = 0.18, p = 0.000$ ).

The addition of LSE scores in Block 3 also significantly but moderately increased  $R^2$  ( $\Delta R^2 = 0.03$ ), accounting for an additional 3.3% of the variance,  $F(6, 522) = 12.27, p = 0.000$ . Contrary to expectations, the OTUSRS in Blocks 2 and 3 was a significant positive predictor of attitudes toward seeking professional psychological help. However, including FFSS in Block 4<sup>a</sup> and FFSS subscales in the alternative Block 4<sup>b</sup> reduced the predictive utility of OTUSRS, indicating that OTUSRS was not linearly related to attitudes toward seeking professional psychological help (ATSPPHS) when the FFSS was included into the Block 4. The change in the contribution of OTUSRS to the prediction of ATSPPHS is explained by the presence of multicollinearity,  $r = 0.31$ , between OTUSR and FFSS.

Unlike the previous blocks, the notable change in  $R^2$  in Block 4<sup>a</sup> indicates that FFSS is a significant predictor of attitudes toward seeking professional psychological help. The addition of FFSS scores in Block 4<sup>a</sup> significantly increased  $R^2$  ( $\Delta R^2 = 0.41$ ), accounting for additional 41% of the variance in ATSPPHS,  $F(7, 521) = 84.35$ ,  $p = 0.000$ . The maximum  $\beta$  weight obtained in Block 3 shifted significantly from  $\beta = 0.196$ ,  $p = 0.000$ , for the OTUSRS to  $\beta = 0.68$ ,  $p < 0.001$ , for the FFSS in Block 4<sup>a</sup>. Also, the OTUSRS  $\beta$  goes to  $-0.010$ ,  $p > 0.05$ , and LSE goes to  $0.149$ ,  $p < 0.001$ . Finally, excluding the FFSS total scale and including the FFSS subscales in the alternative block (Block 4<sup>b</sup>) also significantly increased  $R^2$  ( $\Delta R^2 = 0.42$ ) accounting for a similar 41.6% of the variance in ATSPPHS,  $F(9, 519) = 67.653$ ,  $p = 0.000$ . All of the FFSS subscales  $\beta$ s were statistically significant. The Family Support subscale contributed the most to predict attitudes of the FFSS subscales ( $\beta = 0.50$ ,  $p = 0.000$ ), followed by the Friends Support subscale ( $\beta = 0.19$ ,  $p = 0.000$ ), and Societal Support subscale ( $\beta = 0.11$ ,  $p = 0.008$ ). The difference between the obtained  $R^2$  in Block 4<sup>a</sup> (0.408) and Block 4<sup>b</sup> (0.416) was trivial, 0.008 (see Table 8).

### Summary

The results showed that KU students have less favorable attitudes toward seeking professional psychological help. In general, female, psychology majors, and participants who previously received counseling services were more likely to view professional psychological services more positively than other groups. The significant unique predictive effects obtained by including the FFSS total scale and subscales indicate that participants with higher FFSS total scales and subscales tend to have more favorable attitudes toward seeking professional psychological help than those with lower FFSS total scale and subscales scores. In addition, these results indicate that family, friends, and societal support toward seeking professional

psychological help, as measured by FFSS, is a better predictor of attitudes than other predictive variables included in the regression analysis (i.e., demographics, OTUSR, LSE).