Mental Health Problems in University Students: A Prevalence Study

Sadia Saleem and Zahid Mahmood
University of Management and Technology, Lahore

Madeha Naz
GC University, Lahore.

A survey of mental health problems of university students was carried out on 1850 participants in the age range 19-26 years. An indigenous Student Problem Checklist (SPCL) developed by Mahmood & Saleem, (2011), 45 items is a rating scale, designed to determine the prevalence rate of mental health problem among university students. This scale relates to four dimensions of mental health problems as reported by university students, such as: *Sense of Being Dysfunctional, Loss of Confidence, Lack of self Regulation and Anxiety Proneness.* For interpretation of the overall SPCL score, the authors suggest that scores falling above one SD should be considered as indicative of *severe* problems, where as score about 2 SD represent very severe problems. Our finding show that 31% of the participants fall in the "severe" category, whereas 16% fall in the "very severe" category. As far as the individual dimensions are concerned, 17% respondents comprising sample of the present study fall in very *severe category* Sense of Being Dysfunctional, followed by Loss of Confidence (16%), Lack of Self Regulation (14%) and Anxiety Proneness (12%). These findings are in lying with similar other studies on mental health of students. The role of variables like sample characteristics, the measure used, cultural and contextual factors are discussed in determining rates as well as their implications for student counseling service in prevention and intervention.

Keywords: University students, mental health, prevalence:

The university years of an individual are emotionally and intellectually more demanding than almost any other stage of education. At this stage, an individual faces a great deal of pressures and challenges that pose a variety of physical, social and emotional difficulties (Rodgers & Tennison, 2009). As a result of changing social and emotional picture of university students, they become more vulnerable for developing mental health problems (Benton, Robertson, Tseng, Newton, & Benton, 2003; Eisenberg, Gollust, Golberstein, & Hefner, 2007; Stanley & Manthorpe, 2001). A plethora of research has focused on study of the prevalence of mental health problems among university population and the findings suggest that throughout the world, a substantial number of university students experience mental health problems (e.g. Adewuya, 2006; Nordin, Talib, & Yaacob, 2009; Ovuga, Boardman, & Wasserman, 2006; Seim & Spates, 2010; Verger, Guagliardo, Gilbert, Rouillon, & Kovess-Masfety, 2009). Studies have also showed that mental health problems among university students are increasing in number as well as in severity (e.g. Hunt & Eisenberg, 2010).

The concept of mental health can be defined and conceptualized differently in different cultures, communities and societies. There are different ways to view the nature and causal factors of mental health problems that may determine the definition of what is mentally healthy and what type of counseling and interventions procedures are appropriate to manage mental health problems (Katherine, 2000). College students struggle with developmental issues and some are struggling with more multifaceted and chronic problems. The more common problems faced by university students are mood disturbances, destructive behaviors, interpersonal problems and impairment of self concept (Grayson, 1989). University students often claim to experience stress, anxiety, symptoms of depression, eating problems and other psychological issues, which have significant negative impact on their academic performance and their mental health (Cooley, Toray, Valdez, & Tee, 2007; Tosevski, Milovancevic, & Gajic, 2010).

During the last decade, university and college counseling centers have reported a shift in the needs of students seeking counseling services from different kind of developmental issues to more severe psychological problems (Gallagher, Gill, & Sysko, 2000; Pledge, Lapan, Heppner, & Roehlke, 1998; O'Malley, Wheeler, Murphey, & O'Connell, 1990; Robbins, May, & Corazzini, 1985; Stone & Archer, 1990). The researchers (e.g. Offer & Spiro, 1987; Rimmer, Halikas, & Shuckit , 1982) concluded that one third of the university students had a diagnosable psychological problem and one fourth of entering college students are disturbed and in need of mental health care. A study was conducted by Drum, Brownson, Denmark and Smith in (2009) on 26, 000 students from 70 colleges and universities. Results showed that 6% of undergraduates and 4% of graduate students had seriously considered suicidal ideations and especially the male graduates were at high risk to commit suicide. Moreover, female students were found to be more prone to develop severe depression and symptoms of anxiety disorder (Eisenberg, Gollust, Golberstein, & Hefner, 2007).

Correspondence concerning this article should be addressed to Sadia Saleem Department of Clinical Psychology University of Management and Technology, Lahore Pakistan, Email:dr.sadiasaleem@yahoo.com sadia.saleem@umt.edu.pk

Gallagher, Sysko, and Zhang (2001) conducted a national survey of 274 Counseling Center institutions. The directors of the Counseling Centers were reported that the psychological problems were increasing both in number and severity in students over the last five years. The report also showed that overall 85% of the university students display severe type of psychological issues. In which 71% students have learning problems, 38% eating disorder, 45 % alcohol problems, sexual assault concerns on campus 33%, and drug use 49%. Overall, approximately 16% of counseling center clients had severe psychological problems. Furthermore, 84% heads of counseling centers indicated that the number of students with severe psychological problems was a major concern. Zivin, Eisenberg, Gollust and Golberstein (2009) carried out a longitudinal study to investigate the persistence of mental health problems among university students. The observation of different mental health problems was taken in two different time points indicating that about half of the students were suffering from at least one mental health problem both at the time of baseline and follow up. It was also found that among those university students who had at least one mental health problem at base line, 60% of them found to have mental health problems two year later. Nordin, Talib, and Yaacob (2009) investigated the relationship between loneliness, personality and mental health problems of university students in Malaysia. The results showed that 34.4% of university students showed mental health problems and positive relation was found between loneliness and mental health problems.

Stallman and Shochet (2009) studied the prevalence of mental health problems among university students in Australia. The sample consisted of 1168 participants predominantly female university students. The K10 (Kessler et al., 2003), was used to determine the prevalence of mental health problems. The K10 is a measure of non-specific psychological distress, was used to screen for DSM-IV anxiety-mood disorders. The findings suggest that almost 45.1% of the participants were having serious psychological disorder. Around 24.4% participants had mild psychological disorders. The findings also suggest that the percentage of students in the elevated range rises to 83.9%, with 31.7% and 33.0% of students reporting distress levels in the mild and moderate ranges, respectively. Stallman (2010) also compared university students and general population on mental health problems. The sample consisted of 6479 participants. Overall prevalence was found about 19.2 %. Interestingly, Hamdan-Mansour, Halabi and Dawani (2009) found that about 75% university students showed depressive symptoms.

In another interesting study Shiels, Gabbay, and Exley (2008) investigated the prevalence of mental health problems in university students through an email survey. It was found that about half of the participants (47%) had anxiety and about 10% scored positively for depression. Adewuya (2006) determine the prevalence of major

depression disorder with alcohol related problems. The sample consisted of 2658 participants from six different colleges. The results revealed that 2 week prevalence of major depression was found to be 23.8% with alcohol dependence and the prevalence of alcohol abuse is 17.2%. Bayram and Bilgel (2008) studied the prevalence of depression, anxiety and stress level among 1617 students of Turkey. The Turkish version of Depression, Anxiety and Stress Scale (DASS, Antony, Bieling, Cox, Enns, & Swinson, 1998) was used. 27.1% of the sample was found to have "moderate or above" severity level of depression whereas 41.1% and 27% were found to have "moderate and above" level of anxiety and stress respectively. The level of anxiety and stress was higher in female students than male students. Similarly, Guney, Khalafat and Boysan (2010) also studied the relationship between life satisfaction, anxiety and depression among university students of Ankara. It was found that life satisfaction was significantly and negatively correlated with anxiety and depression.

Most of students who have problems do not receive any therapeutic or counseling services (Zivin, Eisenberg, Gollust, & Golberstein, 2009). Mental health problems among the university students have both short term and long term consequences including decreasing work capacity and poor academic performance (Andrews & Wilding, 2004; Breslau, Lane, Sampson, & Kessler, 2008; Lyubomirsky, Kasri, & Zehm, 2003). Mental health problems are positively associated with increased nicotine and alcohol use (e.g. Lenz, 2004; Weitzman, 2004) and low self-esteem (e.g. Restifo, Akse, Guzman, Benjamins, & Dick, 2009; Sonnak & Towell, 2001). The need and the value of student counseling is supported by the fact that whenever such services are provided, the demand of such services often tend to increase in time. The awareness about increasing mental health problems and associated negative consequences also increase the demand for developing counseling services for university students (e.g. Cranford, Eisenberg, & Serrar, 2009; Harrar, Affsprung, & Long, 2010; Hunt & Eisenberg, 2010).

The area of mental health problems among university students in Pakistan has attained very little attention. Zaman (1996) explored the mental health issues in medical students. The research findings suggest that 39% of the students reported the symptoms of low mood, anxiety among 36%, and depression among 25%, along with interpersonal and academic difficulties. In another recent study (Mahmood & Saleem, 2011), the patterns of mental health problems on 803 university students were explored. The four different patterns of problems emerged namely, Sense of being dysfunctional, Loss of confidence, and Lack of self-regulation and Anxiety proneness.

A wealth of research evidence suggest that mental health problems of university students are beginning to get attention from researchers and these problems are increasing (e.g. Harrar, Affsprung, & Long, 2010; Seim & Spates, 2010). If we look at the prevalence studies closely

we can see that that most of researches have focused on the mental health disorders rather than problems (e.g. Shiels, Gabbay, & Exley, 2008; Sysko, & Zhang 2001). The university life is a transitory phase where the students experience many pressures and challenges (Bayram & Bilgel, 2008; Grayson, 1989) and, as a result; they may experience mental health problems. By keeping in mind the changing demand and pressures, it might be unfair to diagnose them as having mental disorders. Moreover, the prevalence rate is very varied mainly because of different assessment tools, different cut off points to determine the severity, and different operational definition of mental health problems.

Despite all these methodological issues, fact remains that a substantial proportion of university students suffer from serious mental health problems that may affect the normal functioning. Also, there is a dearth of systematic research in Pakistan to assess the magnitude and burden of mental health problems experienced by university students. The ample evidence suggests that it is very essential to conduct a prevalence study that can provide a base for further developing student counseling services.

Aims
- To determine the prevalence rate of mental health problems among university students in Pakistan.
- To determine the relationship of mental health problems with key demographic variables.

Method
Participants
The sample of the current study comprised of 1850 university students, among them 61% were female and 39% were male. The multistage sampling technique was used to select the sample. In the first stage, stratified sampling technique was used to divide the sample into four strata of BS Hon across gender. The participants were further selected randomly from four public sector universities. The age range of the participants was 19-26 years (Mean= 21.48; *SD* 1.73).

Instrument
Following instruments were used in the current research.

Demographic form.
This form consisted of some key demographic variables that literature has suggested to be associated with mental health problems of university students. The demographic variables included age, gender, parental education and family system.

Student Problem Checklist
In order to measure the mental health problems of university students, an indigenously developed Student Problem Checklist (SPCL, Mahmood & Saleem, 2011) was used. SPCL consist of 45 items measuring four different types of mental health problems namely Sense of Being Dysfunctional, Loss of Confidence, Lack of Self Regulation

and Anxiety Proneness. This scale was found to have acceptable level of psychometric properties, with the internal consistency of 0.94 and test retest reliability of 0.81 with one week interval. The split half reliability of SPCL is 0.83.

Procedure
The brief aims and objectives were sent to the six public sector universities of Lahore, the second largest city of Pakistan. Two universities refused to participate whereas four universities granted permission for data collection. All the authorities were assured that all the information in this study will be kept confidential and will only be used for research purposes. Once the permission was granted, the university authorities were asked to provide participants at random from all the eight semesters of BS Hon. The test was administered in group setting. Each group consisted of about 20 students participants were informed about the main objectives of the research and were assured that this information will be kept confidential and will only be used for research purposes. They were also informed that they have right to withdraw from research at any stage of testing. After giving brief introduction, the final assessment protocol comprised demographic form and SPCL. They were asked to rate each item of SPCL to the extent in which it bothers them. The average testing time was 15 minutes. After completion, all the participants were debriefed.

Results

Table 1
Means and Standard Deviations of Years of Age, Father and Mother's Years of Education of the Participants (N=1850)

Variables	*M*	*SD*
Age	21.47	1.71
Father's education (years)	12.20	3.16
Mother's education (years)	10.51	3.43

Table 1 **show that the average level of respondents' fathers' education is Intermediate whereas t**hat of mothers is Matriculation.

Table 2
Percentages of the Demographic Characteristics of the Participants (N= 1850)

Variables	Male %	Female %	Total %
Gender	38.80	61.20	100
Age			
19 or less	51.91	48.09	9.89
20	43.36	56.64	21.57
21	34.67	65.33	24.32
22	36.43	63.57	20.92
23	39.01	60.99	9.84
24 or more	32.93	67.07	13.46
Family System			
Nuclear	44.02	55.98	65.50
Joint	61.35	38.65	34.50

Table 2 reveals that there are more participants in the age group 21 years (24%) and a relatively larger number of participants come from nuclear family system (65.50%).

Psychometric Properties of SPCL

Although SPCL was found to have acceptable psychometric properties (for more details Mahmood & Saleem, 2011) yet, internal consistency, test-retest reliability and split half reliably was also measured for the current research.

Table 3
Cronbach Alpha of four factors and total score on SPCL

Factors	No of items	Alpha Coefficients
Dysfunctional	16	.91
Loss of confidence	12	.87
Lack of self regulation	8	.86
Anxiety proneness	9	.90
Total SPCL Score	45	.95

The above table revealed that SPCL was found to have high internal consistency for the current sample.

Split half reliability

The split half reliability of SPCL using odd and even method was found 0.82 (p 0.001). The Cronbach alpha for Form A and B was found to be 0.89 and 0.91 ($p<0.001$) respectively.

Test-retest reliability

One week test retest reliability of SPCL on 15% (n= 279) participants shows r = 0.84 ($p<0.001$).

Table 4
Means and Standard Deviations of the Sample (N=1850) across Gender on Four Factors and the Total Score on SPCL

Factors	Male		Female		Total	
	M	SD	M	SD	M	SD
I Sense of being dysfunctional	15.93	8.54	20.27	8.54	18.59	7.56
II Loss of confidence	12.85	7.59	13.32	8.01	13.14	7.85
III Lack of self regulation	11.32	4.60	10.79	4.95	10.99	4.82
IV Anxiety proneness	9.07	5.11	14.18	4.56	12.19	5.39
SPCL Total	48.18	22.82	58.57	19.26	54.93	21.20

Prevalence of Mental Health Problems

On the basis of the means and standard deviations computed for the four factors and the total score on SPCL, the three categories were made namely "Moderate" (mean score), " Severe" (1*SD* above the mean), and "Very Severe" (2*SD* or above the mean). The scores were calculated by adding all the responses on each factor, where higher the score means higher mental health problems.

Table 5
Percentage of Sample (N= 1850) Falling into Three Categories on Four Factors and Total Problems Scores on SPCL

Factors	Moderate %	Severe %	Very Severe %
I Dysfunctional	56	27	17
II Loss of Confidence	56	28	16
III Lack of self-regulation	54	32	14
IV Anxiety Proneness	52	36	12
SPCL Total	53	31	16

The above table shows that if we consider "very severe" category as a cut off point for having serious mental health problems, there are about 16% of the participants who need clinical attention. Almost 31% of the participants fall into "Severe" category. Sense of being Dysfunctional was the most frequently reported mental health problem among university students (17%), followed by Loss of Confidence (16%), Lack of self Regulation (14%) and Anxiety proneness (12%).

Table 6
Means, Standard Deviations t and p- values of Male (n= 718) and Female (n= 1132) on Four Factors and Total Problems Score on SPCL

Factors	Gender	M	SD	t	p<	95% CI		Cohen's d
						LL	UL	
I Being Dysfunctional	Male	15.93	8.54	12.55	0.001***	1.17	.62	.58
	Female	20.27	8.54					
II Loss of Confidence	Male	12.85	7.59	1.27	0.205 (ns)	1.01	.27	.06
	Female	13.32	8.01					
III Lack of Self Regulation	Male	11.32	4.60	3.34	0.001***	.37	2.92	.16
	Female	9.79	4.95					
IV Anxiety Proneness	Male	9.07	5.11	22.40	0.001***	1.54	3.29	.63
	Female	14.18	4.56					
Total Score	Male	48.18	22.82	9.51	0.001***	1.61	2.77	.44
	Female	58.57	19.26					

df =1848 ***$p<0.001$

The above table indicates that male and female university students are significantly different on Sense of Being Dysfunctional, Lack of self regulation, Anxiety Proneness and Total score ($p<0.001$) where female participants were significantly higher than males on Sense of Being Dysfunctional, Anxiety Proneness and Total Problems on SPCL. Male participants scored significantly higher than female on Lack of self Regulation. Whereas, on Loss of confidence factor, there was no gender difference observed.

Demographic Variables and Mental Health Problems

Age

In order to see mean difference between different age groups of the participants (N=1850) on SPCL total score and four dimensions, Analysis of Variance (ANOVA) was carried out. The results revealed no significant difference among different age groups on mental health problems ($p>0.05$).

Parental education and family system

In order to determine the relationship between mental health problems of university students and parental education and family system, a series of statistical procedures were used. It was fund that parental education, family system and mental health problems remained unrelated to the mental health problems of university students ($p>0.05$).

Discussion

It is generally acknowledged that students are more vulnerable to mental health problems than the general population (Benton et al., 2003; Eisenberg et al., 2007). This is due to not only the stress of academic pressures but also several factors like growing up to adulthood, the demands impending practical life, developing and maintaining relationships and other extraneous factors(Rodgers & Tennison, 2009). One thing well supported by research is that some of the problems experienced by students early in life may become long lasting and even affect psychosocial functioning far into later years (e.g. Cooley et al., 2007; Tosevski et al., 2010; Zivin et al., 2009). Others are more of transitory nature and most students grow out of in time. In measuring the severity of such problems, researches have usually taken rather a nomothetic approach-the higher than average level of intensity of symptoms is equated with severity of the symptom. However, the presence of symptoms is not the same as having a disorder.

Therefore, in this study it is not prevalence of diagnostic categories but manifestations of effects of stress by students were more a focus of the study. Furthermore, diagnosis is a clinical decision that may require a number of factors other than presence, or absence, of a symptom. Such decisions cannot be reliable if made solely on the basis of self report of the subject without taking into account the developmental history of the problem, the course of the symptoms, relative contribution of pre-dispositional and experiential factors and so on. In the traditional prevalence studies, there is usually a wide variation in the findings reported (e.g. Hamdan-Mansour et al., 2009; Stallman & Shochet, 2009). In case of student populations, the prevalence of mental health problems varies from 4% to 85% (Drum et al., 2009; Gallagher et al., 2001; Zivin et al., 2009). The relative unreliability of diagnostic approach may not be the only reasons for the diversity of findings reported in the prevalence studies. Moreover, the variations in prevalence rates reported in different studies may be due to a number of situational factors. For example, the population under study, how a problem is defined, the type of instrument used, the time, place and the context may all influence the results of a prevalence study. However, irrespective of the precise rate of psychological problems in University students, most studies support the finding that a large proportion of this part of population experience psychological problems warranting early identification and timely prevention.

It would be more advantageous to have a functional view to ask, "When does a symptom become a problem"? The obvious answer would be when it interferes in the normal function of the individual. This is more related to the intensity rather than a cluster of problems. It is in this way that symptoms rather than diagnosis indication of what was reported by the students were taken into account.

In this study a stratified sample of 1850 university population were asked to rate themselves on an indigenously developed Student Problems Checklist (SPCL, Mahmood & Saleem, 2011). Prevalence rates were ascertained by calculating the percentage of the sample falling into "severe" category ($1SD$ above the mean) and "very severe" ($2SD$ above the mean for each of the four factors and the total SPCL score. The overall prevalence figures may not be comparable to similar studies. In the present study instead of diagnostic categories individual clusters of symptoms were examined. The first and the most salient factor was a sense of being Dysfunctional. It would seem that when stress affects one's performance, especially in a competitive environment and a public arena like the university one's own level of functioning becomes more important, (sometimes the same feeling might be construed as negative evaluation of the self as in depression). However, this inference would be considered more functional. 27% of the sample falls within $1SD$ of the mean and another 17% percent of the sample is with $2SD$ of the mean. Similar picture emerges for the other factors like Lack of Confidence, Lack of Self Regulation and Anxiety Proneness. The overall figure for the total "severe" and "very severe" categories are 31% and 16% respectively. The magnitude of psychological problems that affect the university students in this sample is quite high. Such high rates warrant urgent and comprehensive response by the authorities. It is important for the appropriate counselling services offered by professionally qualified and trained personnel are made readily available to university student so that the effects of the services can be mitigate by timely intervention.

As far as the gender is concerned, female university population reported more problems on Sense of Being Dysfunctional and Anxiety Proneness. These findings of the current research are consistent with the earlier studies (e.g. Eisenberg et al., 2007). Moreover, male participants were significantly higher on Lack of self regulation.

This study also paves the way for undertaking longitudinal studies to identify students who may show sign of vulnerability early on and those who end up becoming chronically ill. Moreover, the magnitude of the problems might also help in policy making and establishing counselling services.

References

Adewuya, A. O. (2006). Prevalence of major depressive disorder in Nigerian college students with alcohol-related problems. *General Hospital Psychiatry, 28,* 169-173.

Andrews, B., & Wilding, J.M. (2004). The relation of depression and anxiety to life-stress and achievement in students. *British Journal of Psychology, 95,* 509-521.

Antony, M. M., Bieling, P. J., Cox, B.J., Enns, M. W., & Swinson, R.P. (1998). Psychometric properties of the 42 item and 21 item versions of the depression anxiety stress scales in clinical groups and a community sample. *Psychological Assessment 10,*176-181.

Bayram, N., & Bilgel, N. (2008). The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology, 43,* 667-672.

Benton, S. A., Robertson, J. M., Tseng, W., Newton, F. B., & Benton, S. L. (2003). Changes in counseling center client problems across 13 years. *Professional Psychology: Research and Practice, 34,* 66-72.

Breslau, J., Lane, M., Sampson, N., & Kessler, R. C. (2008). Mental disorders and subsequent educational attainment in a US national sample. *Journal of Psychiatric Research, 42,* 708-716.

Cooley, E., Toray, T., Valdez, N., & Tee, M. (2007). Risk factors for maladaptive eating patterns in college women. *Eating and Weight Disorders, 12* (3), 132–139.

Cranford, J.A., Eisenberg, D., & Serrar, A. M. (2009). Substance use behaviors, mental health problems, and use of mental health services in a probability sample of college students. *Addictive Behaviors, 34,* 134-145.

Drum, D.J., Brownson, C., Denmark, A.B., & Smith, M.E. (2009). New data on the nature of suicidal crises in college students: Shifting the paradigm. *Professional Psychology: Research and Practices, 40,*213-22.

Eisenberg, D., Gollust, S.E., Golberstein, E., & Hefner, J.L. (2007). Prevalence and correlates of depression, anxiety, and suicidality among university students. *American Journal of Orthopsychiatry, 77,* 534-542.

Gallagher, R., Gill, A., & Sysko, H. (2000). *National survey of counseling center directors.* Alexandria, VA: International Association of Counseling Services.

Gallagher, R., Sysko, H., & Zhang, B. (2001). *National survey of counseling center directors.* Alexandria, VA: International Association of Counseling Services

Grayson, P.A.(1989). The college psychotherapy client: An overview. In P. A. Grayson., &K. Cauley.(Eds.), *College Psychotherapy* (pp 8-28). New York: The Guilford Press.

Guney, S. Khalafat, T., & Boysan, M. (2010). Dimensions of mental health: Life satisfaction, anxiety and depression: A preventive mental health study in Ankara University students population. *Procedia Social and Behavioral Sciences, 2,* 1210-1213.

Hamdan-Mansour , A.M., Halabi , J. O., & Dawani , H.A. (2009). Depression, hostility, and substance use among university students in Jordan. *Mental Health and Substance Use Dual Diagnosis, 2*(1), 52-63.

Harrar, W. R., Affsprung, E.H., & Long, J.C. (2010). Assessing Campus Counseling Needs. *Journal of College Student Psychotherapy, 24,* 233-240.

Hunt. J., & Eisenberg, D. (2010). Mental health problems and help-seeking behavior among college students. *Journal of Adolescent Health, 46,* 3-10.

Katherine, W. (2000). *Promoting mental, emotional and social health: A whole school approach.* London: Routledge Falmer.

Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., & Hiripi, E. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry, 60*(2), 184-189.

Lenz, B. K. (2004). Tobacco, depression, and lifestyle choices in the pivotal early college years. *Journal of American College Health, 52,* 213-219.

Lyubomirsky, S., Kasri, F., & Zehm, K., (2003). Dysphoric rumination impairs concentration on academic tasks. *Cognitive Therapy Research, 27,*309-330.

Mahmood, Z. & Saleem, S. (2011). Assessing psychological problems in university students in Pakistan: A psychometric study. *FWU Journal of Social Sciences 5*(1), 134-148.

Nordin, N. M., Talib, M. A., & Yaacob, S.N. (2009). Personality, Loneliness and Mental Health among Undergraduates at Malaysian Universities. *European Journal of Scientific Research, 36*(2), 285-298.

Offer, D., & Spiro, R. P. (1987). The disturbed adolescent goes to college. *Journal of American College Health,* 35, 209-214.

O'Malley, K., Wheeler, I., Murphey, J., & O'Connell, J. (1990). Changes in level of psychopathology being treated at university and college counseling centers. *Journal of College Student Development,* 31, 464-465.

Ovuga, E., Boardman, J., & Wasserman, D. (2006). Undergraduate student mental health at Makerere University, Uganda. *World Psychiatry, 5*(1), 51-52.

Pledge, D., Lapan, R., Heppner, P., & Roehlke, H. (1998) Stability and severity of presenting problems at a university counseling center: A 6-year analysis. *Professional Psychology Research and Practice, 29*(4), 386-389.

Restifo, K., Akse, J., Guzman, N. V., Benjamins, C., & Dick, K. (2009). A pilot study of self-esteem as a mediator between family factors and depressive symptoms in young adult university students. *Journal of Nervous Mental Disorder, 197*(3), 166-171.

Rimmer, J.D., Halikas, J.A., & Shuckit, M. A. (1982). Prevalence and incidence of psychiatric illness in college students: A four year prospective study. *Journal of American College Health,* 30, 207-211.

Robbins, S., May, T., & Corazini, J. (1985). Perceptions of client needs and counseling center staff roles and functions. *Journal of Counseling Psychology, 32,* 641-644.

Rodgers, L.S., & Tennison, L.R. (2009). A preliminary assessment of adjustment disorder among First-Year College Students. *Archives of Psychiatric Nursing, 23*(3), 220-230.

Seim, R.W., & Spates, C. R. (2010). The prevalence and comorbidity of specific phobias in college students and their interest in receiving treatment. *Journal of College Student Psychotherapy, 24*, 49-58.

Shiels, C., Gabbay, M., & Exley, D. (2008). Psychological distress in students registered at a university-based general practice. *Primary Care and Community Psychiatry, 13,* 9-18.

Sonnak, C., & Towell, T. (2001). The impostor phenomenon in British university students: Relationship between self-esteem, mental health, parental rearing style and socioeconomic status. *Personality and Individual Differences, 31,* 863-874.

Stallman, H.M. (2010). Psychological distress in university students: A comparison with general population data. *Australian Psychologist, 45*(4), 249-257.

Stallman, H.M., & Shochet, I. (2009). Prevalence of mental health problems in Australian university health services. *Australian Psychologists, 44*(2), 122-127.

Stanley, N., & Manthorpe, J. (2001). Responding **to students'** mental health needs: Impermeable systems and diverse users. *Journal of Mental Health, 10*(1), 41-52.

Stone, G., & Archer, J. (1990). College and university counseling centers in the 1990s: Challenges and limits. *Counseling Psychologist, 18,* 539-607.

Tosevski, D.L., Milovancevic, M.P., & Gajic, S.D. (2010).Personality and psychopathology of university students. *Current Opinion in Psychiatry, 23*(1), 48- 52.

Verger, P., Guagliardo, V., Gilbert, F., Rouillon, F., & Kovess-Masfety, V. (2009). Psychiatric disorders in students in six French universities: 12-month prevalence, comorbidity, impairment and help-seeking. *Social Psychiatry Psychiatric Epidemiology, 45*(2), 189-199.

Weitzman, E. R. (2004). Poor mental health, depression, and associations with alcohol consumption, harm, and abuse in a national sample of young adults in college. *The Journal of Nervous and Mental Disease, 192,* 269-277.

Zaman, R. M. (1996). Psychological problems of medical students in Pakistan: Data from the Aga Khan University, Karachi. *Teaching and Learning in Medicine, 8*(1), 19-27.

Zivin,K., Eisenberg, D., Gollust, S. E., & Golberstein, E. (2009). Persistence of mental health problems and needs in a college student population. *Journal of Affective Disorders 117,* 180-185.