# Students with Psychiatric Disabilities Studying at Higher Education

by

Azizi bin Yahaya<sup>1</sup>
Goh Siao Yen<sup>2</sup>
Faculty of Education (Psychology)
University Technology Malaysia (Skudai)

### **ABSTRACT:**

With the advent of improved psychiatric medication, there has been a phenomenal increase of students with psychiatric disabilities studying at higher education in North America. Similarly in Malaysia, and unaware to many, there has been a growing number of such a population. The aim of this research was to determine the demographic characteristics of students with psychiatric disabilities studying at higher education in Johore, and their level of performance at four related variables (coping difficulties, symptomatology, self-esteem and academic achievement). The survey was conducted at Sultanah Aminah Hospital and Permai Hospital, Johore. (The pilot study was done in Sarawak General Hospital, Kuching.) Data from a sample of 30 respondents was collected using a questionnaire and analysed using the Statistical Package for Social Sciences (SPSS) v. 13. Besides reporting descriptive statistics on demographic characteristics, their level of coping difficulties at school was found to be low, illness symptoms low, self-esteem high and academic achievement at a good GPA mean of 3.03 (out of a 4 point system). The findings imply coping difficulties experienced, that they do not pose a danger, the role change to being a "student" assisted recovery and the findings also imply the capability to pursue educational goals. Recommendations are thus made to professionals and co-workers, as well as policy makers (the latter regarding the proposed Persons with Disabilities Act 2002).

(Keywords: psychiatric disabilities, mental health, coping difficulties, illness symptoms, self-esteem and academic achievement

## INTRODUCTION

Adults with have been regarded as mostly too ill, unmotivated, disruptive, academically unprepared and incapable of meeting the demands of higher education (Waghorn et al., 2004, p.454; Mowbray et al., 2006; Austin, 1999, in Mowbray et al., 2005). However, there have been reports of a proliferation of adults with psychiatric disabilities in higher education settings in North America (Sharpe et al., 2004; Mowbray et al., 2006; Collins and Mowbray, 2005; U.S. Department of Education, 1992, in Werner, 2001, p.19-21). Within one year, for instance, five institutions in the Big Ten

Associate Professor with PhD in Psychology

Study is part of her dissertation (Goh, in-press) in fulfilment of her MEd (Psychology). Direct correspondences to: gohsiaoyen@yahoo.com

Conference encountered an increase from 30% to 100% in the number of students with psychiatric disorders (Measel, 1998, in Sharpe et al., 2004). Epidemological studies already reported approximately 5 – 18% of college students with a diagnosable mental psychiatric illness (Measel, 1998, in Sharpe et al., 2004), even epidemological studies in the 1980's (Rimmer, Halikas, & Schukit, 1982, Stangler & Printz, 1980, Nagelberg & Shemberg, 1980, in Megivern, Pellerito & Mowbray, 2003, p.218; Mowbray et al., 2006, p.227).

In today's technological society, people are becoming aware that at least a higher education certification is needed to earn an adequate income (Pierson, 2002, in Mowbray et al., 2005; Bond et al., 1997, in Mowbray et al., 1999). When adults with psychiatric disabilities become students at higher education, it has been found that the role change to a "student" status instead of the stigmatized and devalued label of a "patient" aided recovery (Mowbray, 2004; Mowbray, 1999, p.6; Unger, 1993; Unger et al., 1991 in Moxley, Mowbray & Brown, 1993, p.138).

#### AIM OF STUDY

In Malaysia, likewise and unknown to many, there has been a growing number of students with psychiatric disabilities studying in higher education. The aim of this research was to determine the demographic characteristics and performances in four related variables among students with psychiatric disabilities at higher education in the state of Johore. The objectives were:

- 1. To determine their demographic characteristics (such as gender, age, race, diagnosis, years since diagnosis, educational program, educational institution, registration mode, and student type).
- 2. To determine their levels of coping difficulties experienced, and current symptomatology, self-esteem and academic achievement.

# **METHODOLOGY**

The research carried out was a survey. The following describes the sample and sampling method, the instrument used and the procedure of the survey.

### Sample

The sample of the research was made up of 30 respondents. The respondents were obtained from Sultanah Aminah Hospital and Permai Hospital, which are the two major government hospitals with psychiatric facilities in Johor.

As the two hospitals had not completely computerised their database of patients, the total population of students with psychiatric disabilities studying at higher education could not

be ascertained. Therefore, a purposive sampling method was employed. The first 30 respondents who met the following four criteria were selected:

- (i) <u>Currently studying</u> in higher education and not taking an illness break (higher education refers to certificate, diploma, graduate diploma, bachelor degree, postgraduate degree and external professional certification)
- (ii) Registered as outpatients
- (iii) Diagnosed by the psychiatrists/medical officers with one or more of the following three group disorders:
  - Mood disorder
  - Anxiety Disorder
  - Psychotic Disorder
- (iv) Illness must <u>not be a transient</u> condition (such as schizophreniform, brief psychotic disorder, and post-traumatic stress disorder)

#### Instrument

The instrument was a structured survey questionnaire. It was made up of several subscales. Coping difficulties was measured with an 18-item inventory designed by the first researcher (Goh) based on "barriers" and "personal difficulties" reported by students with psychiatric disabilities in literature (Mowbray & Megivern, 1999; Megivern, Pellerito & Mowbray, 2003; Mowbray et al., 2006, p.227). Respondents were asked to tick whether they had the coping difficulties listed in the inventory using a continuous scale indicating 0 ("none"), 1 ("a little"), 2 ("some") and 3 ("a lot'). Some of the coping difficulties include "difficulty maintaining concentration", "unable to maintain a good attendance record (esp. for early morning classes – due to sleep pattern disturbance), "hospitalization" and "side-effects of medication, making studying difficult".

The symptomatology of all the three group disorders (mood, anxiety and psychotic) was measured with an established scale, the Modified Colorado Symptom Index (Conrad et al., 2001). The Modified Colorado Symptom Index (MCSI) has 14 items and its frequency scale ranged from a value of 0 (none at all) to 4 (at least every day). The MCSI measures the symptomatology or illness symptoms of the last one month to the time of survey.

Self-esteem was measured with the established 10-item Rosenberg Self-Esteem Scale widely used in health psychology. Its scale used ranged from 1 ("strongly disagree") to 4 ("strongly agree").

The respondents' academic achievement measured was in the form of their latest grade point average (GPA). The GPA adopted as the standard for the study was according to the grading system of University Technology Malaysia (UTM), Skudai. Where the respondents' academic result was in the form of a grade, the conversion to a GPA-equivalent was documented for reliability purpose. Where it was in the form of a percentage, it was converted to a GPA-equivalent using a mathematical formula created by the first researcher (Goh) and checked by referring to a postgraduate Statistics

lecturer. A photocopy of the respondents' academic result was requested as a documentary evidence.

## **Procedure**

Prospective respondents were selected using a manual search through the files guided by the Random Number Table (Kerlinger, 1973) as the Terminal Digit System of the government hospitals had all the patient files organised into 100 divisions. Recommendations of patients were also provided by psychiatrists, and some patients were called on when they came to the hospitals for their regular psychiatric consultations. Then they were further screened through to ensure they met the sample criteria, before invitation to participate was given. The questionnaire was either self-administered at respective hospitals or sent as a postal questionnaire (to those studying/residing in the hinterlands of Johor, other parts of Malaysia and overseas). An informed consent form (based on models from Creswell, 2002, p.161 and Rizal et al., 2005) briefly describing the research and confidentiality assured was given and signed by the respondent. The 30 respondents that made up the sample comprises of 21 from Sultanah Aminah Hospital and 9 from Permai Hospital.

A pilot study conducted earlier was at Sarawak General Hospital, Kuching; with 10 respondents. Feedback from the pilot study provided information for improving the instrument and the reliability tests found the Cronbach's alpha for all the abovementioned scales ranging from 0.859 to 0.962.

# **Data Analysis**

The analytical techniques used with the Statistical Package for Social Sciences (SPSS) version 13 were mean, standard deviation, frequency, and percentage. The interpretative scales for the variables reported under Objective 2 were divided into five divisions, ranging from "very low level" to "very high level".

### **FINDINGS**

There were no missing value as the first researcher called the respondents to complete items missed out in the questionnaire, so n=30 for all variables and demographic characteristics examined. The findings below are reported according to the objective they come under.

# Objective 1

The 30 respondents were made up of slightly more males (n=16, 53%) compared to females (n=14, 47%).

The youngest respondent was 18 years old while the oldest was 58 years old. The mean age was 25.03. The variance was wide, with a standard deviation of 7.6. The age range

which was most common was 21 - 25 years old, with half the sample (53%, n=16) being in that range. Apparently, the majority of the respondents (90%, n=27) were aged between 18 and 30.

Most of the respondents were Malays (n=19, 63%), followed by Chinese (n=9, 30%) and Indians (n=2, 7%) while there were no respondent of other races. In terms of the diagnosis according to group disorders, mood disorder was the most common. Slightly more than half of the sample were diagnosed with mood disorders (57%, n=17), followed by psychotic disorders comprising 30% (n=9) and then anxiety disorders (13%, n=4).

In terms of specific disorder, the most common were schizophrenia (23%, n=7) and what was loosely diagnosed as "depression" (23%, n=7). "Depression" was an unspecific diagnosis written by the clinicians which could be any of the depressive disorder listed: that is, major depressive disorder, bipolar disorder, dysthymia or depression with psychotic feature. Major depressive disorder and bipolar disorder were the next most common specific diagnosis with 10% (n=3) of the respondents each. This was followed by panic disorder, dysthymia, depression with psychotic feature, and schizoaffective disorder (7%, n=2 each). Apparently, there was no generalized anxiety disorder reported.

Most of the respondents selected had only in recent years been diagnosed. The minimum duration since diagnosis of respondents was 0.5 year while the maximum was 10 years. The mean years since diagnosis of respondent was 3.11 years (SD=2.05) while the mode were 3.0 and 4.0 years and the median 3.0 years. Apparently, the years since diagnosis of most of the respondents clustered around the first four years.

Slightly over half of the respondents (57%, n=17) were studying in a bachelor degree program, either locally or overseas. This is followed by diploma or advanced diploma programs with 23% of the respondents (n=7). There were 2 students (7%) each studying in a certificate and postgraduate degree program. Only one student was studying a graduate diploma while one other in an external professional certification course (3% each).

It was found that 30% (n=9) of the respondents were from University Technology of Malaysia (UTM), Skudai, Johor. Most of the other 70% were from higher education institutions both in Johor and in other parts of West Malaysia (none apparently studying in East Malaysia). Two respondents were studying overseas: one in Singapore and the other in Taiwan.

93% of the respondents (n=28) were full-time students while 7% (n=2) were part-time students.

It was found that an equal number of them (n=15, 50%) were Type I students (those who became ill <u>during</u> their current educational pursuit) and Type II students (those who became ill <u>before</u> their current educational pursuit).

# Objective 2

The level of coping difficulties found among the sample was low (overall mean = 0.99, standard deviation = 0.62). The five greatest coping difficulties were: difficulty maintaining concentration (M=1.67); followed by test anxiety or non-test anxiety (M=1.60); other illness symptoms [eg. mood swings, irritable moods, hostile, paranoia, lack of motivation, depression, delusions, hallucinations, overwhelmed/stressed out] (M=1.60); problem with memory (M=1.30) and lack of meta-cognitive skills [eg. planning, organizing, making decisions] (M=1.23).

The coping difficulties experienced the least were: substance-abuse, disruptive/inappropriate behaviour or legal issues with criminal justice system (M=0.10); followed by mental health professional, faculty or family member(s) unsupportive of academic pursuit (M=0.37); and hospitalization (M=0.43).

The level of illness symptoms was also of a low level (overall M=1.21, SD=1.10). The five illness symptoms with the highest levels were: nervous, tense, worried, frustrated or afraid (M=2.03); followed by trouble concentrating (M=1.63); depressed (M=1.60); lonely (M=1.57); and trouble making decision (M=1.47).

The three illness symptoms of lowest levels were: feeling like hurting or killing oneself (M=0.40); followed by feeling like seriously hurting others (M=0.57); and hearing voices or seeing things (M=0.63).

The level of self-esteem was of a high level (M=2.92, SD=0.53).

The level of academic achievement found among the sample showed a mean GPA of 3.03 (SD=0.63), which is a Grade B or a second class honours (upper) performance.

### **DISCUSSIONS**

The findings in terms of gender are similar to Rizal et al. (2005) which surveyed a nationwide sample of 522 respondents with the same three group disorders. There has not been any prior study done on students with psychiatric disabilities in Malaysia but a comparison can be made by observing the student population in large higher education institutions in Malaysia. Such observation indicates that the findings in terms of age are consistent with the Malaysian higher education student population. Whereas in terms of race, the findings of the current study are consistent with the 2006 racial distribution from the IPTS (*Institusi-institusi Pengajian Tinggi Swasta*, or Private Higher Education Institutions) and the Malaysian 2004 general population (The World Factbook). In short, the consistencies with representative data in terms of gender, age and race justifies that the sample is fairly representative of its accessible population (students with psychiatric disabilities in Johor) as well as its target population (students with psychiatric disabilities in Malaysia).

The distribution of diagnoses confirms the findings of some previous research such as Megivern, Pellerito and Mowbray (2003), and Kahng and Mowbray (2005).

The years since diagnosis confirms again another of Megivern, Pellerito and Mowbray's (2003) finding. Working out the "age of first diagnosis" of the sample based on the "year of diagnosis" and "age" reported by the respondents, it was found that 90% of the sample's age of first diagnosis were between 16 and 28. This is similar to vast literature that states that the typical age of first onset is around 16 to 25 (Beiser, Erickson, Fleming, & Iacono, 1993, & Beratis, Gabriel, & Hoidas, 1994, in Collins & Mowbray, 2005; Barlow & Durand, 2002; Mueser & Gingerich, 1994; Kunz & Finkel, 1987).

The distribution of the educational program found in the sample showed a larger proportion of bachelor degree students and a smaller proportion of diploma and certificate students compared to the 2006 data from the IPTAs (*Institusi-institusi Pengajian Tinggi Awam*, or Public Higher Education Institutions). [The data from the IPTAs can be a representative data of the Malaysian higher education population since students from the IPTAs makes up the biggest proportion of the higher education students in Malaysia.] The IPTAs had 47% bachelor degree, 32% diploma, and 15% certificate students. The bigger proportion of bachelor degree students and smaller proportion of diploma and certificate students in the current study can be explained by the availability and spread of higher education institutions located in the state of Johore, where almost half of the sample (47%) were studying in. In Johore, the UTM Skudai is a major higher education institution with nearly 25,000 students ("Quick Facts 2007") and most of its courses are bachelor degree programs. This fact also explains how 30% of the sample (n=9) came from the UTM Skudai.

The distribution of the student types (the Type I and Type II students) also confirms Megivern, Pellerito and Mowbray's (2003) finding.

The low level of coping difficulties and illness symptoms, high level of self-esteem and good academic achievement can be explained by the fact that the sample are students with psychiatric disabilities who are currently studying and not having an onset/relapse or taking an illness break. A finding from an item in the questionnaire found 70% of the students having regular maintenance of medication and psychiatric consultation.

All the individual coping difficulties and illness symptoms specifically listed in ranking order above confirm Megivern, Pellerito and Mowbray's (2003) finding, Mowbray and Megivern's (1999), Collins and Mowbray's (2005) and Unger and Pardee's (2002).

The most prominent coping difficulties found repeated in illness symptoms were concentration problem, depression, test and non-test anxiety and trouble making decisions.

Contrary to the beliefs of many and the heightened media on recent school gunmen attributing it to students with psychiatric problems, students with psychiatric disabilities are generally not disruptive, violent or a danger threat as found in this study besides other literature support (Megivern, Pellerito and Mowbray, 2003; Teplin, 1985 in Unger, 1992; Unger 1992). Only 2 out of the 30 respondents had problem with the law, substance abuse or disruptive behaviour. The feeling to hurt oneself or to hurt others were symptoms lowest in occurrence and at least 70% of the sample (n=21) did not have such a feeling. The 9 respondents or less who experienced such violent feeling mostly had experienced it "once during the month" only.

The level of self-esteem found among the sample is similar to Ratzlaff et al.'s (2006) findings on adults with psychiatric disabilities participating in a Supported Education program which assisted them in their educational pursuit. Consistent with Bley et al. (1992) and Murphy and Murphy (2006), their level of self-esteem is lower than the general normal population as found by Rosenberg (1989, in Murphy & Murphy, 2006). Nevertheless, their self-esteem is of a "high" level according to the interpretative scale for self-esteem.

The academic achievement is almost the same as a normed data of bachelor degree students reported by Ooi (2002), except that the percentage of failure is higher in the current study (7%, n=2) compared to Ooi (2002) at 1.5%. The mean GPA score of 3.03 implies good academic capability among higher education students with psychiatric disabilities. This is supported by Unger and Pardee (2002) and Unger (1993) who found that higher education students with psychiatric disabilities but assisted with a Supported Education program had mean GPAs of 3.14 (with documentary support) and 3.50 (self-reported). Dougherty (1992, in Dougherty et al., 1996) reported that a majority of his participants in a clubhouse (under a Supported Education program) received B grades or higher.

## IMPLICATIONS AND CONCLUSIONS

Firstly, an implication of these findings is that higher education students with psychiatric disabilities are intellectually capable (that is, with maintenance of medication and when they are not experiencing a relapse/onset).

Secondly, they experience a certain amount of coping difficulties and illness symptoms. A separate finding of this research, which cannot be ignored, found at least 35% college attrition rate (withdrawals and deferrals).

Thirdly, the high level of self-esteem of those who are able to maintain their education reflects an improved prognosis resulting from a role change to a "student" status rather than the devalued role of a "patient".

The good academic achievement and high level of self-esteem have demonstrated that the beliefs of people with psychiatric disabilities as entirely incapable of educational pursuit are "myths of the bygone era", as supported by Austin (1999, in Mowbray et al., 2005) and Mowbray et al. (2006).

Moreover, students with psychiatric disabilities who are medication-compliant are generally not violent or disruptive.

The appearance of students with psychiatric disabilities or the future appearance of more such students in the campus grounds of Malaysia is an example of a paradigm shift. The "rising tide" (Eudaly, 2002, in Sharpe et al., 2004) of higher education students with psychiatric disabilities has been made possible by the advent of new generation psychiatric medication with less side effects and better psychiatric care (Kane, 2000; Seligman, Walker & Rosenhan, 2001; Nolen-Hoesksema, 2004; Barlow & Durand, 2002), the drugs bringing about improved cognitive ability (Bentley & Walsh, 2001; Geddes, Freemantle, Harrison & Bebbington, 2000; Kotulak, 2003; Weiss, Bilder & Fleischhacker, 2002; all in Mowbray et al., 2005) and effective rehabilitation methods (Haefner & Maurer, 2000; Harrington & Clark, 1998; both in Collins & Mowbray, 2005).

# RECOMMENDATIONS

It is recommended that mental health professionals, co-workers and staff be aware of and be more sensitive to the coping difficulties of a growing number of students with psychiatric disabilities; and support them as they fight it while pursuing educational goals.

As this study has found that students with psychiatric disabilities are capable of academic pursuit and a survey showed nearly two-thirds of adults with psychiatric disabilities wanting more education (Rogers et al., 1991, in Zahniser, 2005); mental health professionals could play a leadership role by encouraging patients who have academic potential to equip themselves with a higher education certification. At the same time, mental health professionals can model a supportive role for such students.

This study is also a proposition to policy makers that people with psychiatric disabilities be formally recognised and included in the definition of the disabled in Malaysia so that assistance (like in Education) can be made available for them, supporting the proposed Persons with Disabilities Act 2002 ("Disability Laws", un-dated) being looked into at time of writing.

Finally, it is hoped too that these findings lead to a consideration of a rehabilitation program such as the Supported Education program (Goh, in-press) which prepares adults with psychiatric disabilities enter or resume higher education and supports students with psychiatric disabilities till the completion of their educational goals. Supported Education is an empirically effective rehabilitative intervention where there are currently over 100 programs in North America (Mowbray, Megivern, & Holter, 2003), and a few recently developed in Australia and Europe (personal communication with Anne Sullivan-Soydan, key researcher in Supported Education for over 20 years). This recommendation is in line with the need for more rehabilitation resources in Malaysia as voiced by Mubarak (2005).

### REFERENCES

- "Disability Laws" (un-dated). *Malaysia: Jobstreet.com*. Retrieved on 20 September 2006 from <a href="http://jobs4disabled.jobstreet.com/laws.htm#8">http://jobs4disabled.jobstreet.com/laws.htm#8</a>
- "Quick Facts 2007". *University Technology Malaysia*. Retrieved on 4 Oct. 2007 from <a href="http://web.utm.my/today/index.php?option=content&task=view&id=461&Itemid=110">http://web.utm.my/today/index.php?option=content&task=view&id=461&Itemid=110</a>
- Barlow, D. H. & Durand, V. M. (2002). *Abnormal Psychology An Integrative Approach*. U.S.A.: Wadsworth Group
- Bley, G. R., Garst, L., & Riva, M. T. (1992). Educational functioning and self-esteem of psychiatrically hospitalized adolescents. Paper presented at the One Hundredth *Annual Meeting of the American Psychological Association*, Washington, D.C.
- Collins, M.E., Bybee, D., & Mowbray, C.T. (1998). Effectiveness of Supported Education for Individuals with Psychiatric Disabilities: Results from an Experimental Study, *Community Mental Health Journal, Vol. 34, No. 6, 595-614, Dec. 1998*
- Collins, M. E. & Mowbray, C. T. (2005). Higher Education and Psychiatric Disabilities: National Survey of Campus Disability Services. *American Journal of Orthopsychiatry*. 2005 Vol. 75, No.2, 304-315.
- Collins, M. E., Mowbray, C. T. & Bybee, D. (1999). Measuring coping strategies in an educational intervention for individuals with psychiatric disabilities. *Health & Social Work*, Vol. 24, Number 4, November 1999.
- Conrad, K. J., Yagelka, J. R., Matters, M. D., Rich, A. R., Williams, V., & Buchanan, M. (2001). Reliability and Validity of a Modified Colorado Symptom Index in a National Homeless Sample. *Mental Health Services Research*. Vol. 3, No. 3, September 2001
- Creswell, J. W. (2002). Educational research planning, conducting and evaluating quantitative and qualitative research. New Jersey, U.S.A.: Pearson Education, Inc.
- Dougherty, Stephen J., Campana, Karen A. (1996). Supported Education: A qualitative study of the student experience. *Psychiatric Rehabilitation Journal*. Winter96, Vol. 19, Issue 3.
- Goh, S. Y. (in-press). The Need for Supported Education among Students with Psychiatric Disabilities at Higher Education in Johor. University Technology Malaysia, Skudai: Masters Dissertation.

- IPTA (2006). Jadual 2.19: Enrolmen Pelajar di IPTA mengikut Tahap Pengajian dan Gender, Tahun 2006. Putrajaya, Malaysia: Bahagian Perancangan dan Penyelidikan, *Kementerian Pengajian Tinggi*.
- IPTS (31 Dec. 2006). Enrolmen Pelajar IPTS. Sektor Pengurusan IPTS, Jabatan Pengurusan IPT. Putrajaya, Malaysia: *Kementerian Pengajian Tinggi*.
- Kahng, S. K., & Mowbray, C. T. (2005). What affects self-esteem of persons with psychiatric disabilities: the role of causal attributions of mental illnesses. *Psychiatric Rehabilitation Journal*, Spring 2005 Vol. 28, Number 4
- Kane, J. M. (2000). Management Issues in Schizophrenia. London: Martin Dunitz Ltd.
- Kerlinger, F. N. (1973). *Foundations of behavioral research*. 2<sup>nd</sup> ed. Holt, Rinehart and Winston, Inc.
- Kunz, J.R.M., & Finkel, A.J. eds. (1987) *The American medical association family medical guide*. Revised & updated. New York: Random House, Inc.
- Megivern, D., Pellerito, S. & Mowbray, C. (2003). Barriers to higher education for individuals with psychiatric disabilities. *Psychiatric Rehabilitation Journal*. Winter 2003. Vol. 26. Number 3
- Mowbray, C. T. (1999). The benefits and challenges of supported education: A personal perspective. *Psychiatric Rehabilitation Journal, Winter99, Vol.22, Issue 3.*
- Mowbray, C. T. (2004). Psychosocial rehabilitation, supported education and social work. *Ongoing Magazine*, Summer/Fall 2004, University of Michigan School of Social Work. Retrieved on 16 August 2006 from <a href="http://ssw.umich.edu/ongoing/04-sf/socialwork.html">http://ssw.umich.edu/ongoing/04-sf/socialwork.html</a>
- Mowbray, C.T., Collins, M.E., & Bybee, D. (1999). Supported Education for Individuals with Psychiatric Disabilities: Long-term Outcomes from an Experimental Study. *Social Work Research*. Jun99. Vol. 23. Issue 2
- Mowbray, C. T., Collins, M. E., Bellamy, C. D., Megivern, D. A., Bybee, D., & Szilvayi, S. (2005). *Social Work*. Volume 50, Number 1, January 2005
- Mowbray, C.T. & Megivern, D. (1999). Higher education and rehabilitation for people with psychiatric disabilities. *Journal of Rehabilitation*.

  October/November/December 1999
- Mowbray, C.T., Megivern, D. & Holter, M.C. (2003). Supported education programming for adults with psychiatric disabilities: results from a national survey. *Psychiatric Rehabilitation Journal*, Fall 2003 Volume 27, Number 2

- Mowbray, C. T., Megivern, D., Mandiberg, J. M., Strauss, S., Stein, C., Collins, K., Kopels, S., Curlin, C., & Lett, R. (2006). Campus mental health services: Recommendations for change. *American Journal of Orthopsychiatry*. Apr2006, Vol. 76 Issue 2, p226-237
- Moxley, D. P., Mowbray, C. T., & Brown, K. S. (1993). Supported Education. In Flexer, R. W. & Solomon, P. L. (1993). eds. *Psychiatric Rehabilitation in Practice*. U.S.A.: Butterworth-Heinemann
- Mubarak, A. R. (2005). Social functioning and quality of life of people with schizophrenia in the northern region of Malaysia. *Australian e-Journal for the Advancement of Mental Health* (AeJAMH), Volume 4, Issue 3, 2005. ISSN: 1446-7984
- Mueser, K. T. & Gingerich, S. (1994). *Coping With Schizophrenia*. Oakland, California: New Harbinger Publications, Inc.
- Murphy, H., & Murphy, E. K. (2006). Comparing quality of life using the World Health Organization Quality of Life measure (WHOQOL-100) in a clinical and non-clinical sample: Exploring the role of self-esteem, self-efficacy and social functioning. *Journal of Mental Health*. Jun2006, Vol. 15 Issue 3, p289-300
- Nolen-Hoeksema (2004). Abnormal Psychology. 3<sup>rd</sup> ed. New York: McGraw-Hill
- Ooi, Y. P. (2002). Stress and anxiety among engineering students and non-engineering students at UTM. University Technology Malaysia: Masters Dissertation.
- Ratzlaff, S., McDiarmid, D., Marty, D. & Rapp, C. (2006). The Kansas Consumer as Provider program: measuring the effects of a supported education initiative. *Psychiatric Rehabilitation Journal*, Winter 2006 Vol. 29, Number 3
- Rizal AM., Aljunid SM., Saroja K., Aziz A., & Azman AB. (2005) Socio-economic impact of three common psychiatric disorders in Malaysia. Paper presented at 37<sup>th</sup> APACPH Conference. Grand Hotel, Taipei, Taiwan
- Seligman, M. E. P., Walker, E. F., & Rosenhan, D. L. (2001). *Abnormal Psychology*. 4<sup>th</sup>ed. W. W. Norton & Company, Inc.
- Sharpe, M. N., Bruininks, B.D., Blacklock, B.A., Benson, B., & Johnson, D.M. (2004). The emergence of psychiatric disabilities in postsecondary education. *National Centre on Secondary Education and Transition Issue Brief*. August 2004, vol.3, issue 1.
- The World Factbook. *Central Intelligence Agency*. Last updated 20 September 2007. Retrieved on 3 October 2007 from <a href="www.cia.gov/library/publications/the-world-factbook/geos/my.html#People">www.cia.gov/library/publications/the-world-factbook/geos/my.html#People</a>

- U.S. Department of Labor (2006-07). Psychologists. Bulletin 2600. *Occupational Outlook Handbook*, 2006-07 Edition, Bureau of Labor Statistics,. Retrieved on 9 October 2006 from <a href="https://www.bls.gov/oco/print/ocos056.htm">www.bls.gov/oco/print/ocos056.htm</a>
- Unger, K. V. (1992) *Adults with psychiatric disabilities on campus*. Washington, DC: Heath Resource Center, American Council on Education
- Unger, K. V. (1993). Creating supported education programs utilizing existing community resources. *Psychosocial Rehabilitation Journal*, Jul 93, Vol. 17, Issue 1
- Unger, K. V. & Pardee, R. (2002). Outcome Measures Across Program Sites for Postsecondary Supported Education Programs. *Psychiatric Rehabilitation Journal*. Winter 2002, Volume 25, Number 3
- Waghorn, G., Still, M., Chant, D., Whiteford, H. (2004). Specialised supported education for Australians with psychotic disorders. *Australian Journal of Social Issues*, Vol.39, No.4, November 2004
- Werner, K. M. (2001). Transitioning and Adapting to College: A Case-study Analysis of the Experience of University Students with Psychiatric Disabilities. Western Michigan University, Kalamazoo: Degree of Doctor of Education Dissertation
- Zahniser, J. H. (2005). Psychosocial Rehabilitation. In Stout, C. S. & Hayes, R. A. (2005) eds. *The Evidence-based Practice Methods, Models and Tools for Mental Health Professionals*. New Jersey: John Wiley & Sons, Inc.