Minor Psychiatric Morbidity in Students Attending a South African University Health Service

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The point prevalence of possible minor psychiatric morbidity (MPM) in students attending general medical services of the Student Health Service (SHS) at the University of Cape Town (UCT) as well as a detection rate of MPM by medical personnel are presented. Using a cross-sectional design, the SRQ-20 was administered to students attending the SHS over a 3-week period ($N = 515$). For logistical reasons no second-stage criterion was administered. Clinical staff were asked to complete a brief questionnaire. Data was analyzed using descriptive statistics and chi-square (χ^2) analysis. The prevalence of minor psychiatric morbidity was estimated at 29% (95% CI of 24.8–32.7%) and a detection rate of 25% was found for MPM. The methodological and substantive implications of this study are discussed and are related particularly to mental health services for students at the University of Cape Town.

KEY WORDS: minor psychiatric morbidity; health psychology; primary care; student mental health service provision.

INTRODUCTION

Using the Self-Reporting Questionnaire (Harding et al., 1983), this study establishes the point prevalence of possible minor psychiatric morbidity (MPM) in students attending the general health services at the University of Cape Town (UCT) Student Health Service (SHS). MPM refers to the "neurotic" disorders (as opposed to "psychotic disorders") that do not require hospitalization or that do not necessarily impair functioning to too great an extent. Goldberg and Huxley (1992) used the term "common mental disorders" and Patel (1998, p. 4) describes these disorders as the contemporary equivalent of the neuroses, a descriptive category that has become increasingly unpopular because of its vague meaning and stigma. The extent to which medical personnel recognize mental health difficulties is also examined.

It has been suggested that over one third of those presenting with somatic complaints in primary health care settings manifest symptoms of psychological distress, and that about 20% are diagnosable with minor psychiatric disorders (Dhadphale, Ellison, & Grifffin, 1983; Ormel, Koeter, Van den Brink, & Van de Willige, 1991; Williams, Tarnopolsky, Hand, & Shepherd, 1986). The prevalence of MPM found in clinic studies in developing countries has varied as indicated by Table I, which outlines prevalences obtained in studies of adult outpatients.

Psychiatric disorders are commonly not detected by general practitioners (Casey, Dillon, & Tyrer, 1984; Ormel et al., 1991; Von Korff et al., 1987; Zung, Magill, Moore, & George, 1983), and this may lead to unnecessary physical investigations, or inadequate interventions (Freeman, Seris, Mathebula, & Price, 1991; Parry & Swartz, 1997). South African

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Table I. The Prevalence of Minor Psychiatric Morbidity in General Health Care Settings in Developing Countries

Authors	Location	Instrument	Sample (n)	Prevalence (%)
De Jong, De Klein, & Ten Horn (1986)	Guine-Bissau	SRQ/PSE	252 (>15 years)	12–18[a]
Dhadphale & Ellison (1983)	Kenya (urban)	SRQ/SPI	200 (18–55 years)	32[b]
Dhadphale, Ellison, & Griffin (1982)	Kenya (rural)	SRQ/SPI	186 (18–55 years)	25.8[b]
Diop, Collignon, Gueye, & Harding (1982)	Senegal	SRQ (1 stage)	933 (adults)	16.2
Freeman, Seris, Mathebula, & Price (1991)	South Africa (SE Transvaal)	SRQ/PSE	363 (>15 years)	8.3[a,a]
Gureje & Obikoya (1992)	Nigeria	GHQ12/CIDI	787	35.1
Hall & Williams (1987)	Zimbabwe	SRQ/PSE	448 (>16 years)	10.5[a]
Harding et al. (1980)	Sudan	SRQ/PSE	360 (>17 years)	10.6[b]
Kortmann (1990)	Ethiopia	SRQ	30 (>17 years)	27[b]
Mari & Williams (1984)	Brazil	GHQ/CIS	120 (>15 years)	46[a]
Miller, Swartz, & Rumble (1991)	South Africa (Mamre)	GHQ28 (1 stage)	159 (>15 years)	45
Ndetei & Muhangi (1979)	Kenya	Clinical examination (1 stage)	140	20
Oduowle & Ogunyemi (1984)	Nigeria	GHQ-30 (1 stage)	80	69
Patel (1998)	Zimbabwe	SSQ/CISR/clinical judgement of care	152	27
Reeler, Williams, & Todd (1993)	Zimbabwe	SRQ (1 stage)	1236	26
Zwi & Thom (1991)	South Africa (Soweto)	SRQ/PSE	301 (16–60 years)	10.3–14.3[a]

Note. In comparing prevalence estimates, it should be noted that those studies marked with Superscript a did not validate their screening instrument for the particular context of the study and those marked with Superscript b did not weight their prevalence estimates back to the original sample. The implication of this is that, strictly, these prevalence estimates are not directly comparable. CIDI = Composite International Diagnostic Interview; CIS = Clinical Interview Schedule; CISR = Revised Clinical Interview Schedule; GHQ = General Health Questionnaire; PSE = Present State Examination; SSQ = Shona Symptom Questionnaire.
[a]Parry (1996) suggests that the low prevalence of MPM reported by Freeman et al. (1991) may be a result of the high cut-off score used on the SRQ.

research indicates low detection and high rates of morbidity (Freeman et al., 1991; Miller, Swartz, & Rumble, 1991). The prevalence and detection of MPM has not been explored in a South African student sample.

METHOD

Population and Sampling

A consecutive sample of students ($N = 515$) attending the general health services of the SHS at UCT over a 3-week period were screened. Excluded from screening were patients who were too ill to fill in a questionnaire, needed emergency medical attention, were repeat attenders (i.e. had already attended once during the time the research was being conducted and had thus been screened), those who declined to participate, and those who had appointments with mental health practitioners. The medical personnel who attended to the individual participants were also asked to complete a questionnaire.

The sample size was calculated in accordance with an expected point prevalence of 20% for MPM.

This point prevalence was chosen because it roughly represents a midpoint of prevalence estimates of MPM found in clinic studies in developing countries. In order to restrict the width of the 95% confidence interval around an estimated prevalence of 20%, a sample size of 500 was chosen because this gives a one-sided width of 3.5%.

Research Design

This was a cross-sectional study. For logistic reasons, a single-stage design was adopted using an instrument that had been explored in a previous two-stage study in adults in the same province of South Africa (see later). Information on the detection of MPM was obtained from attending health service personnel.

Instruments

Student Questionnaire

The Self-Reporting Questionnaire (SRQ-20; Harding et al., 1983; see Table II), together with

Table II. The Self-Reporting Questionnaire (Harding et al., 1983)

1. Do you often have headaches?	Yes/No
2. Is your appetite poor?	Yes/No
3. Do you sleep badly?	Yes/No
4. Are you easily frightened?	Yes/No
5. Do your hands shake?	Yes/No
6. Do you feel nervous, tense or worried?	Yes/No
7. Is your digestion poor?	Yes/No
8. Do you have trouble thinking clearly?	Yes/No
9. Do you feel unhappy?	Yes/No
10. Do you cry more than usual?	Yes/No
11. Do you find it difficult to enjoy your daily activities?	Yes/No
12. Do you find it difficult to make decisions?	Yes/No
13. Is your daily work suffering?	Yes/No
14. Are you unable to play a useful part in life?	Yes/No
15. Have you lost interest in things?	Yes/No
16. Do you feel that you are a worthless person?	Yes/No
17. Has the thought of ending your life been in your mind?	Yes/No
18. Do you feel tired all the time?	Yes/No
19. Do you have uncomfortable feelings in your stomach?	Yes/No
20. Are you easily tired?	Yes/No

questions to assess sociodemographic characteristics (such as race and gender) was administered to the student sample. The SRQ-20 is a 20-point, easily administered instrument with a binomial response format that was developed as part of the WHO collaborative study on strategies for extending mental health care (Harding et al., 1983) to screen for MPM in primary health settings in developing countries. A respondent is considered to be a potential psychiatric case if the total number of "yes" answers reaches or surpasses a fixed value (cutoff point). Each of the items is scored 0 or 1—1 for an affirmative answer and 0 for a negative answer. Second stage psychiatric assessment is needed to confirm psychiatric caseness (Beusenberg & Orley, 1994).

The SRQ has been used in many studies in developing countries, including Colombia, India, the Philippines and Sudan (Harding et al., 1980), Brazil (Mari & Williams, 1985), Guinea-Bissau (De Jong, De Klein, & Ten Horn, 1986), kenya (Dhadphale & Ellison, 1983; Dhadphale, Ellison, & Griffin, 1982), Senegal (Diop, Collignon, Gueye, & Harding, 1982), Ethiopia (Kortmann & Ten Horn, 1988), Zimbabwe (Hall & Williams, 1987), Colombia (Lima, Chavez, Samaniego, & Pai, 1992), India (Sen, 1987), Sudan (Rahim & Cederblad, 1989), and South Africa (Bhagwanjee, Parekh, Paruk, Petersen, & Subedar, 1998; Freeman et al., 1991; Petersen, Bhagwanjee, Parekh, Paruk, & Subedar, 1996; Rumble, Swartz,

Parry, & Zwarenstein, 1996; Thom, Zwi, & Reinach, 1993).

We recently validated the SRQ in the Western Cape in South Africa, using the Present State Examination (Wing, Cooper, & Sartorius, 1974) as the second-stage criterion (Rumble et al., 1996). This was, however, a community study whereas the current study was undertaken in a university clinic setting. Rumble et al. (1996) arrived at weighted sensitivity and specificity coefficients of 49% and 82%, respectively. This is indicative of a high false positive rate and a low false negative rate.

Practitioner Questionnaire

For each patient seen, clinical staff attending to the student sample were required to complete the Health Staff Rating Schedule (HSR; de Jong et al., 1986; Hall & Williams, 1987) by endorsing one of five items: I think this patient has (1) a physical health problem only; (2) a mental health problem only; (3) a physical and mental health problem; (4) no health problem of any kind; (5) no rating possible.

Data Collection

For 14 consecutive weekdays, self-administered, English-version questionnaires were distributed to all students attending the general medical services at SHS. Participation was voluntary, and students were assured of confidentiality. Because UCT is an English medium university, it was assumed that students would be competent in English.

Methods of Analysis

Sociodemographic characteristics of the sample and the point prevalence of possible MPM were analysed using descriptive statistics. Thereafter, chi-square tests (χ^2) were used to determine the statistical significance of associations between variables of interest. Where the results were significant, the degree of relationship was assessed using measures of association (phi [ϕ] and odds ratios for 2×2 tables and Cramer's phi/v [V] for larger contingency tables; Howell, 1992). For larger contingency tables, analysis of standardized residuals enabled the judgement of the post hoc significance of the departure from independence in individual cells (Hays, 1997).

A number of factors assisted in controlling the familywise error rate (FW), namely, the reporting of exact *P* values, the use of a large sample, which is likely to estimate effects more accurately, and the implementation of the Bonferroni correction. In this study, only the "main comparisons" (i.e. all comparisons besides standardized residuals) were tested for significance, using the Bonferroni correction. Using a FW error rate of 5%, the threshold level of significance was .0002. It may be assumed, therefore, that amongst the significant "main comparisons" there is a 5% probability that at least one Type I error has occurred. For standardized residuals, an α of .05 was used. The rationale behind this decision is based on the fact that, as a consequence of less power, standardized residuals are unlikely to reach a significance level of less than .0002. Statistical power depends partly upon sample size (Howell, 1992). Because standardized residuals are based upon comparisons between single cells of larger contingency tables, they are generally based, also, upon smaller sample sizes.

RESULTS

A response rate of 92.13% was obtained and no pattern of noncompletion of questionnaires could be related to the variables being studied.

Prevalence of Minor Psychiatric Morbidity

Total scores on the SRQ-20 ranged from a minimum of 0 to a maximum of 19 (where 20 was the highest possible score; range = 20), with a mean of 5.35 and a standard deviation of 4.5. The total scores were significantly asymmetrically distributed (the distribution was positively-skewed, with 73 [14.17%] of the respondents scoring 0). A cutoff point of 7/8 (equal or greater than 8) was chosen. This is a fairly conservative cutoff point and the decision was based on that used by Rumble et al. (1996) and other authors who have used the SRQ (e.g., De Jong et al., 1986; Dhadphale et al., 1982; Diop et al., 1982; Hall and Williams, 1987; Iacoponi & Mari, 1989; Lima, Chavez, Samaniego, & Pai, 1992; Mari & Williams, 1985; Reichenheim & Harpham, 1991; Sen, 1987; Thom et al., 1993).

Twenty nine percent of students (*n* = 148; 95% CI of 24.8–32.7%) attending student health scored 8 or above on the SRQ. Based on a cutoff point of 7/8, therefore, there is a 29% point prevalence of MPM in a sample of students attending the SHS at UCT.

Relationship Between Minor Psychiatric Morbidity, Race, and Gender

Chi-square analysis shows MPM to be unrelated to race or gender ($\chi^2 = 4.13$; $p > .39$ and $\chi^2 = 4.88$; $p > .09$, respectively).

Relationship Between HSR Ratings and Minor Psychiatric Morbidity

For statistical purposes, in order to avoid expected frequencies <5, and also in order to simplify the analysis, HSR ratings were regrouped into three categories, (1) a physical health problem only, (2) a mental health problem only and a physical and mental health problem, and (3) no health problem of any kind or no rating possible.

Of 147 students who scored 8 and above on the SRQ, 36 (25%; 95% CI of 18.6–33%) were given a rating for a mental health problem by practitioners. Of the 357 who scored below 8 on the SRQ, 26 (7.3%) were rated as having a mental health problem on the HSR, indicating that the chances of being rated as having a mental health problem was 3.42 times as likely for those scoring above the SRQ cut-off. The detection rate of 25% for MPM indicates a 75% rate of "hidden psychiatric morbidity" (Goldberg & Huxley, 1980) compared to the findings of the SRQ. There are indications though that more severe problems are more easily detected (where severity is conceptualized as number of symptoms): of the 25 students who scored 15 and above on the SRQ, 10 (40%) were rated positive on the HSR.

DISCUSSION

Twenty-nine percent of the sample have possible MPM, as measured by the SRQ-20. This prevalence estimate falls within the midrange of prevalence rates found in other studies in developing countries, as shown in Table I. The prevalence estimate found in this study needs to be considered in the light of the obvious limitation of using a one-stage screening and thereby basing validity estimates on previous research. The cost of two-stage studies especially in developing countries is, however, often prohibitive. Parry (1996) notes that screening instruments in general tend to overestimate prevalence, an observation supported by Rumble et al. (1996) from whose study validity estimates were drawn for the present investigation.

It should be noted that the prevalence of MPM established in this study may have been influenced by the timing of the data collection as data was collected during study week for midyear examinations and there may have been a conflation, therefore, between a "case" of psychiatric disorder and a normal response to academic stress.

No relationship between MPM and gender was indicated. This is contrary to the findings of researchers such as Burvill & Knuiman (1983); Gove (1978); Vasquez-Barquero, Wilkinson, Williams, Diez-Manrique, & Pena (1990); Verhaak (1995); Shepherd, Cooper, Brown, & Kalton (1966), but is similar to results obtained by some studies in developing countries (Dhadphale et al., 1983; Giel & Van Luijk, 1968; Rumble et al., 1996). No relationship between MPM and race was found. This finding is possibly contrary to expectations generated by the UCT Readmissions Committee Assistance Officer (1997), who reported that many of the students that she counselled from educationally disadvantaged backgrounds felt isolated and alienated at the university, a situation that might be expected to generate depression and anxiety.

A detection rate of 25% for MPM accords with South African research by Freeman et al. (1991) who found a detection rate of less than 33%. Given however the possibility of a high false positive rate on the SRQ, the true detection rate in our study may well be higher. Even so, the calculated detection rate is higher than those indicated by Hall and Williams (1987; 4.25%) and Abiodun (1989; 14.6%). Rates of detection increased as SRQ scores increased and this conforms with Ormel et al.'s findings (Ormel et al., 1991) that detection rates for severe disorders are higher than those for less severe disorders.

In spite of what on the basis of international research appears to be a relatively good detection rate for MPM, there is room for improved detection by health service personnel.

The rate of MPM amongst health service attenders may have implications for mental health service provision; however, this question would need to be considered in the light of further research tracking the natural history and spontaneous remission rates of MPM in this population.

International research generally shows higher rates of MPM amongst clinic attenders than amongst nonattenders. In a university context (similar to a child or adolescent psychiatry context), however, MPM could be expressed through other help-seeking routes—such as seeking assistance with academic

work. Given the cultural plurality of the student population, furthermore, other sectors of healing may also play an important role. Further research into these alternative paths of help seeking will facilitate integrated planning of mental health services at the university.

The formal assessment of MPM amongst student populations specifically remains an underresearched area especially in developing countries, which face particular challenges in ensuring that scant resources for higher education are optimally used and not compromised in any way. This lack of formal research is in spite of the fact of considerable interest at one time in culture-specific disorders associated with adjustment to higher education (Prince, 1985). We hope that the current finding will stimulate further research and debate.

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