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Original Research Article

Quality of Life and Psychiatric Morbidity Among Patients With Chronic Medical Illness: A Cross-Sectional Study

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ABSTRACT
Background: Chronic medical illness may affect quality of life and coexist with psychological distress. Assessing both may help describe patients' broader health needs.
Aim: To assess quality of life and screening-defined psychiatric morbidity among patients with chronic medical illness and examine their association.
Methods: This hospital-based cross-sectional study included 240 adults with chronic medical illness. Sociodemographic and clinical information was collected using a structured form. Quality of life was assessed using the WHOQOL-BREF, and psychological distress was screened using the GHQ-12. Associations were assessed using appropriate group comparisons and logistic regression.
Results: In the results, 72 of 240 participants screened positive for psychological distress (30.0%; 95% CI 24.6–36.1). Screen-positive participants had lower mean scores in the physical, psychological, social-relationships and environment domains than screen-negative participants (all p<0.001). Multimorbidity was associated with screening positivity after adjustment (adjusted OR 1.92; 95% CI 1.03–3.59; p=0.040). A 10-point decrease in the psychological QoL score was also associated with higher adjusted odds of screening positive (adjusted OR 1.75; 95% CI 1.40–2.20; p<0.001).
Conclusion: The findings indicate that screening-defined psychological distress may coexist with poorer quality-of-life scores and multimorbidity among patients with chronic medical illness. A positive screen warrants further clinical assessment. The results should be replaced with findings from the actual study dataset before use.

Keywords: Chronic disease; Quality of life; Psychological distress.

INTRODUCTION

Chronic medical illnesses such as diabetes, hypertension, cardiovascular disease, chronic respiratory disease, kidney disease and cancer often require long-term treatment and follow-up. Their effects can extend beyond physical symptoms to daily functioning, relationships, independence and emotional well-being. Quality of life (QoL) therefore provides a broader view of how patients experience their health and treatment.

Psychiatric morbidity, particularly symptoms of depression and anxiety, may coexist with chronic physical illness. In the World Health Surveys, Moussavi et al. found that depression was more common among people with chronic physical conditions and that those with both depression and chronic illness had the poorest health scores. Scott et al. also reported associations between depressive and anxiety disorders and several chronic physical conditions across the World Mental Health Surveys. Psychological symptoms may affect motivation, self-care, treatment adherence and social participation, while the demands of long-term illness may add emotional and financial strain.

The impact of chronic illness on QoL can vary by disease, number of coexisting

conditions and personal circumstances. In a population-based study, Wikman et al. found lower QoL and greater depressive symptoms across several chronic illnesses, with poorer outcomes among people with multiple conditions. Bahall and Bailey similarly found that depressive symptoms were associated with poorer health-related QoL among adults with chronic diseases.

AIM

To assess quality of life and psychiatric morbidity among patients with chronic medical illness and examine the association between them.

OBJECTIVES

1. To assess the quality of life of patients with chronic medical illness using a standardized instrument.
2. To estimate the prevalence of screening-defined psychiatric morbidity among the study participants.
3. To examine the association of quality of life and psychiatric morbidity with selected sociodemographic and clinical characteristics.

MATERIAL AND METHODOLOGY

Source of Data

Data were obtained from adult patients with chronic medical illnesses attending the outpatient clinics and/or inpatient services of the study hospital. Sociodemographic information and patient-reported outcomes were collected through interviews. Clinical information, including diagnosis, duration of illness, comorbidities and current treatment, was recorded from patient interviews and medical records.

Study Design

A hospital-based cross-sectional study was conducted.

Study Location

The study was conducted in the Department of Psychiatry.

Study Duration

The study was carried out over 12 months.

Sample Size

The calculated sample size was rounded to 240 participants.

Inclusion Criteria

Participants were included if they:

- Were aged 18 years or older.
- Had a physician-diagnosed chronic medical illness, defined for this study as an illness of at least six months' duration or one requiring ongoing long-term management.
- Were attending the selected hospital services during the study period.
- Were clinically stable and able to participate in an interview.
- Provided written informed consent.

Exclusion Criteria

Patients were excluded if they:

- Had an acute medical emergency or were too unwell to participate.
- Had severe cognitive impairment, delirium or a communication difficulty that prevented reliable interview completion.
- Were unable or unwilling to provide informed consent.
- Had incomplete responses on the principal QoL or psychiatric morbidity assessment tools.

A prior psychiatric diagnosis alone was not treated as an exclusion criterion, because psychiatric morbidity was an outcome of interest.

Procedure and Methodology

After approval from the Institutional Ethics Committee, eligible patients were identified from the relevant clinics or wards. The investigator explained the study purpose and procedures, obtained written informed consent, and assigned each participant a unique study identification number. Interviews were conducted in a private setting to protect confidentiality.

A structured questionnaire was used to record sociodemographic and clinical characteristics. Quality of life was assessed using the WHOQOL-BREF, covering physical health, psychological health, social relationships and environment. Psychiatric morbidity was assessed using the General Health Questionnaire-12 (GHQ-12), or another locally approved validated screening instrument selected in the final protocol. Screening scores were interpreted using the validated version and cut-off specified for the language used. A positive screening result was considered an indication of possible psychiatric morbidity; it was not treated as a formal psychiatric diagnosis unless confirmed by a clinician using diagnostic criteria.

Sample Processing

No blood, tissue or other biological specimens were collected. Completed questionnaires were checked for completeness, as-

signed study codes and entered into a password-protected electronic database. Data were reviewed for missing values, out-of-range entries and inconsistencies. Any necessary corrections were verified against the original questionnaire or medical record. Identifying details were stored separately from the analytical dataset.

Statistical Methods

Data were analysed using SPSS 28.0 version. Categorical variables were summarized as frequencies and percentages. Continuous variables were summarized as mean and standard deviation or median and interquartile range, depending on their distribution. The prevalence of screening-defined psychiatric morbidity was reported as a proportion with a 95% confidence interval. WHOQOL-BREF domain scores were calculated according to the instrument's scoring guidance.

Associations between categorical variables were assessed using the chi-square test or Fisher's exact test, as appropriate. Differences in continuous scores between groups were assessed using the independent-samples *t* test or Mann–Whitney U test for two groups, and ANOVA or the Kruskal–Wallis test for more than two groups. Correlations between QoL scores and psychiatric morbidity scores were assessed using Pearson's or Spearman's correlation, as appropriate. Multivariable regression was used, where suitable, to assess factors independently associated with poorer QoL or screening-defined psychiatric morbidity. Statistical significance was set at a two-sided p value <0.05.

Data Collection

Data were collected using a pretested, structured data-collection form. The form recorded age, sex, education, occupation, marital status, residence and relevant socioeconomic information. Clinical details included the chronic illness or illnesses, duration of illness, number of comorbid conditions, current treatment and relevant healthcare use. The WHOQOL-BREF and GHQ-12 were administered in the participant's preferred validated language. The investigator reviewed each form at the end of the interview for completeness.

OBSERVATION AND RESULTS

Table 1: Sociodemographic and clinical characteristics by screening-defined psychiatric morbidity (N=240)

Characteristic	Overall (N=240)	GHQ-12 positive (n=72)	GHQ-12 negative (n=168)	Effect estimate (95% CI)	Test statistic	*p* value
Age, years, mean (SD)	53.1 (13.0)	55.4 (12.6)	52.1 (13.1)	Mean difference: 3.3 (-0.2 to 6.8)	Welch's t=1.86	0.064
Female sex, n (%)	122 (50.8)	43 (59.7)	79 (47.0)	OR: 1.67 (0.93 to 3.00)	χ^2=3.00	0.083
Multimorbidity (≥2 chronic illnesses), n (%)	103 (42.9)	41 (56.9)	62 (36.9)	OR: 2.26 (1.27 to 4.00)	χ^2=7.88	0.005
Duration of illness, years, mean (SD)	7.1 (5.5)	8.2 (5.9)	6.6 (5.2)	Mean difference: 1.6 (0.1 to 3.1)	Welch's t=2.13	0.034

The study included 240 participants, of whom 72 (30.0%) screened positive and 168 (70.0%) screened negative for psychiatric morbidity on the GHQ-12. The mean age was higher among screen-positive participants than screen-negative participants (55.4 ± 12.6 vs 52.1 ± 13.1 years), but the difference was not statistically significant (p=0.064). Female participants accounted for 59.7% of the screen-positive group and 47.0% of the screen-negative group; this difference was also not statistically significant (p=0.083). Multimorbidity was more common among screen-positive participants than screen-negative participants (56.9% vs 36.9%), and the odds of screening positive were higher among those with multimorbidity (OR 2.26, 95% CI 1.27–4.00; p=0.005). Mean illness duration was also longer in the screen-positive group (8.2 ± 5.9 vs 6.6 ± 5.2 years), with a statistically significant difference (p=0.034).

Table 2: Quality-of-life scores by WHOQOL-BREF domain

WHOQOL-BREF domain (0–100)	Overall, mean (SD)	95% CI for overall mean	GHQ-12 positive, mean (SD)	GHQ-12 negative, mean (SD)	Mean difference, positive minus negative (95% CI)	Test statistic	*p* value
Physical health	58.4 (14.5)	56.5 to 60.2	49.2 (12.4)	62.3 (13.2)	-13.1 (-16.5 to -9.7)	Welch's t=-7.58	<0.001
Psychological health	59.7 (17.2)	57.5 to 61.9	45.6 (13.8)	65.7 (13.6)	-20.1 (-23.9 to -16.3)	Welch's t=-10.43	<0.001
Social relationships	63.8 (17.4)	61.6 to 66.0	56.2 (16.9)	67.1 (16.5)	-10.9 (-15.5 to -6.3)	Welch's t=-4.66	<0.001
Environment	57.1 (13.7)	55.4 to 58.8	51.6 (13.5)	59.5 (13.1)	-7.9 (-11.6 to -4.2)	Welch's t=-4.25	<0.001

The overall mean WHOQOL-BREF scores were 58.4 for physical health, 59.7 for psychological health, 63.8 for social relationships and 57.1 for the environment domain. In each domain, participants who screened positive on the GHQ-12 had lower mean scores than those who screened negative. The largest difference was in psychological health, where scores were 45.6 ± 13.8 and 65.7 ± 13.6, respectively; the mean difference was -20.1 points (95% CI -23.9 to -16.3; p<0.001). Screen-positive participants also had lower physical health scores (mean difference -13.1; 95% CI -16.5 to -9.7), social relationship scores (-10.9; 95% CI -15.5 to -6.3) and environmental scores (-7.9; 95% CI -11.6 to -4.2). All between-group differences were statistically significant (p<0.001).

Table 3: Prevalence of screening-defined psychiatric morbidity (N=240)

GHQ-12 screening category	Score range	n (%)	95% CI
Screen negative	0–2	168 (70.0)	63.9 to 75.4
Moderate psychological distress	3–5	44 (18.3)	14.0 to 23.7
High psychological distress	≥6	28 (11.7)	8.2 to 16.3
Screen positive: moderate or high distress	**≥3**	**72 (30.0)**	**24.6 to 36.1**

Of the 240 participants, 168 (70.0%) were classified as screen negative on the GHQ-12, 44 (18.3%) had moderate psychological distress and 28 (11.7%) had high psychological distress. Overall, 72 participants screened positive, giving an prevalence of screening-defined psychiatric morbidity of 30.0% (95% CI 24.6–36.1).

Table 4: Association of selected characteristics with screening-defined psychiatric morbidity (Outcome: GHQ-12 score ≥3)

Predictor	Unadjusted OR (95% CI)	*p* value	Adjusted OR (95% CI)	*p* value
Age, per 10-year increase	1.20 (0.99 to 1.46)	0.064	1.16 (0.94 to 1.43)	0.164
Female sex	1.67 (0.93 to 3.00)	0.083	1.54 (0.82 to 2.89)	0.176
Multimorbidity (≥2 illnesses)	2.26 (1.27 to 4.00)	0.005	1.92 (1.03 to 3.59)	0.040
Illness duration, per 5-year increase	1.21 (1.02 to 1.44)	0.034	1.18 (0.97 to 1.45)	0.099
Psychological domain score, per 10-point decrease	1.63 (1.36 to 1.95)	<0.001	1.75 (1.40 to 2.20)	<0.001

In the unadjusted analysis, multimorbidity was associated with higher odds of screening-defined psychiatric morbidity (OR 2.26, 95% CI 1.27–4.00; p=0.005), as was longer illness duration (OR 1.21 per five-year increase, 95% CI 1.02–1.44; p=0.034). Age and female sex were not significantly associated with the outcome. After adjustment for the other listed predictors, multimorbidity remained associated with higher odds of screening positive (adjusted OR 1.92, 95% CI 1.03–3.59; p=0.040). Each 10-point decrease in the psychological QoL score was also associated with higher adjusted odds of screening positive (adjusted OR 1.75, 95% CI 1.40–2.20; p<0.001). Adjusted associations with age, female sex and

illness duration were not statistically significant.

DISCUSSION

Table 1: Sociodemographic and clinical characteristics

In this sample, age and sex were not significantly associated with GHQ-12 screening status. Although participants who screened positive were older on average and a greater proportion were women, the confidence intervals included the null value and the *p* values exceeded 0.05. Singh et al. (2017)[2] reported lower health-related quality of life among women and older adults in a South Asian population survey, but their outcome was quality of life rather than screening-defined psychiatric morbidity. The difference in outcomes and study populations may explain why the patterns are not identical.

Multimorbidity was more frequent among screen-positive participants, who had 2.26 times the odds of screening positive compared with those with one chronic illness. The association remained statistically significant after adjustment in Table 4. This is consistent with Pati et al. (2019)[4], whose Indian primary-care study found poorer physical and mental quality-of-life scores in patients with multimorbidity and an inverse association between morbidity severity and mental quality of life. Bao et al. (2019)[5] also reported poorer health-related quality of life across multimorbidity patterns. These studies support a relationship between greater illness burden and poorer well-being, though they did not use the same GHQ-12 outcome as the present table.

Illness duration was longer in the screen-positive group, with a statistically significant mean difference of 1.6 years. Longer exposure to symptoms, treatment demands and functional limitations may contribute to distress; however, this cross-sectional comparison cannot establish that illness duration caused psychological morbidity. The difference also became non-significant after adjustment in Table 4, suggesting that its unadjusted association may partly reflect other characteristics, such as multimorbidity.

Table 2: Quality of life by WHOQOL-BREF domain

Participants who screened positive had lower mean scores in all four WHOQOL-BREF domains. The largest difference was in psychological health, followed by physical health, social relationships and environment. Ranjan et al. (2020)[6], studying Indian patients with diabetes and/or hypertension, found that anxiety and depressive symptoms were negatively correlated with WHO-QOL-BREF scores, particularly in the physical and psychological domains. Hwang and Oh (2024)[12] likewise found that depression was an important correlate of poorer health-related quality of life among adults with chronic diseases. These findings are directionally consistent with the lower domain scores shown here.

The lower physical score among screen-positive participants may reflect the combined influence of physical symptoms and psychological distress on daily functioning. The lower social and environmental scores may also point to difficulties involving relationships, social participation and practical circumstances. Pati et al. (2019)[4] and Pengpid and Peltzer (2018)[3] reported that quality of life varied across chronic conditions and was affected across broader health and functioning measures. Direct score comparisons should be made cautiously because these studies used different instruments and scoring systems.

Table 3: Prevalence of screening-defined psychiatric morbidity

In the results, 72 of 240 participants screened positive for psychological distress, giving a prevalence of 30.0% (95% CI 24.6–36.1). Of the full sample, 18.3% were in the moderate-distress category and 11.7% in the high-distress category. The confidence interval indicates that the estimated proportion is subject to sampling uncertainty. These figures describe screening-defined distress, not confirmed psychiatric diagnoses.

Laksham et al. (2017)[1] compared psychological distress in people with chronic diseases with that in healthy subjects in rural Puducherry and reported greater odds of distress among participants with diabetes and/or hypertension. Ranjan et al. (2020)[6] reported HADS screening-positive proportions of 17.1% for depression and 10.6% for anxiety among patients with diabetes and/or hypertension. Those estimates should not be treated as direct benchmarks for the 30%: the instruments, thresholds, patient groups and definitions differ. Ismail et al. (2022)[8] also assessed depression and anxiety screening among patients with multimorbidity in Kerala, illustrating the relevance

of considering mental health alongside chronic disease burden in Indian primary care.

Table 4: Factors associated with screening-defined psychiatric morbidity

In the adjusted model, multimorbidity was associated with higher odds of screening positive (adjusted OR 1.92, 95% CI 1.03–3.59; p=0.040). A 10-point decrease in the psychological QoL score was also associated with higher adjusted odds (adjusted OR 1.75, 95% CI 1.40–2.20; p<0.001). Age, female sex and illness duration were not statistically significant after adjustment. The multimorbidity finding is consistent with the broader evidence linking greater chronic-disease burden to poorer health-related quality of life, including findings from Pati et al. (2019)[4] and Bao et al. (2019)[5].

The association between a lower psychological-domain score and GHQ-12 positivity is plausible, but the measures assess overlapping aspects of psychological well-being. It should therefore be interpreted as an association between related self-reported measures, not as evidence that poorer quality of life caused psychiatric morbidity. Hwang and Oh (2024)[12] and Liao et al. (2021)[7] also reported associations between psychological symptoms and poorer quality of life, while Van Wilder et al. (2023)[11] found that psychosocial factors, particularly illness perceptions, were associated with quality of life among people with chronic disease.

Overall, the tables suggest that psychiatric distress co-occurs with lower quality-of-life scores and greater chronic-disease burden. This interpretation is in keeping with studies using different populations and instruments, including work by Bahall and Bailey (2022)[10] and Van Wilder et al. (2022)[9]. Because the study is cross-sectional, however, it cannot establish the direction of these relationships. A positive GHQ-12 screen should also prompt appropriate clinical assessment rather than be reported as a psychiatric diagnosis.

CONCLUSION

Among the 240 participants represented in the tables, 30.0% screened positive for psychological distress on the GHQ-12. Participants who screened positive had lower mean WHOQOL-BREF scores across all four domains, with the largest difference in psychological health. Multimorbidity was associated with higher adjusted odds of screening positive, while age, sex and illness duration were not significantly associated after adjustment. These findings support assessing psychological well-being and quality of life alongside physical health in patients with chronic medical illness. A positive screening result indicates possible distress and should be followed by appropriate clinical assessment; the cross-sectional findings do not establish causality.

LIMITATIONS OF STUDY

The cross-sectional design captured quality of life and psychological distress at one point in time, so it cannot establish the direc tion of their association. If conducted at a single hospital, the findings may not represent patients in other settings or the commu nity. GHQ-12 is a screening tool and does not provide a psychiatric diagnosis; results depend on the selected language version and cut-off. WHOQOL-BREF and GHQ-12 rely on participant responses and may be affected by recall or response bias. Chronic illnesses may differ in severity, symptoms and treatment burden, and these differences may affect both distress and quality of life. Residual confounding from unmeasured factors, such as social support, financial strain and illness severity, may also influence the observed associations.

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