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Original Article

Quality of Life in General Hospital Adult Patients: A Cross-Disciplinary Analysis from Pakistan

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ABSTRACT

Objective: To compare the quality of life (QoL) in adult patients with different illnesses.
Study Design: Analytical cross-sectional.
Place and Duration of Study: Combined Military Hospital (CMH) Kharian, Pakistan, from Oct 2020 to Feb 2021.
Methodology: This cross-sectional study was conducted by enrolling 512 adults with pre-established medical diagnoses via convenient sampling where QoL was assessed using the World Health Organization Quality of Life (WHOQoL-BREF) tool across four domains (physical, psychological, social, and environmental), with data analyzed using descriptive statistics, one-sample t-test, independent samples t test and one-way ANOVA on SPSS version 21.00.
Results: Patients of chronic illnesses reported lowest levels of QoL and QoL-related to physical health ($p<0.01$), psychological wellbeing ($p<0.01$) and social relationships ($p<0.01$) varied significantly amongst the groups. Males reported better physical health ($p<0.01$) while females reported better environment related QoL ($p<0.05$). Increasing age was found to be a risk factor, while higher education was found to be a protective factor. Type of occupations (physical health: $p<0.01$, psychological wellbeing: $p<0.01$, social relationships: $p>0.05$, and environment: $p>0.05$) and rural-urban background (physical health: $p<0.01$, psychological wellbeing: $p<0.01$, social relationships: $p>0.05$, and environment; $p>0.05$) also significantly influenced patients' physical health and psychological wellbeing.
Conclusion: Patients suffering from chronic illnesses reported significantly poorer quality of life compared to those with other conditions, with QoL scores varying across physical, psychological, social, and environmental domains.

Keywords: Chronic illnesses, Eczema, Hypertension, Primary Health Care, Quality of Life.

How to Cite This Article: *Ahmad S, Hussain S, Barkat M, Anas S, Sajjad MW. Quality of Life in General Hospital Adult Patients: A Cross-Disciplinary Analysis from Pakistan. Pak Armed Forces Med J 2025; 76(Suppl-2): S388-S392. DOI: https://doi.org/10.51253/pafmj.v76iSUPPL-2.6495*

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INTRODUCTION

The World Health Organization (WHO) defines QoL as perception of individual's position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.[1] At a local level, negligible data is present for QoL in different illnesses, yet various clinical conditions are known to deteriorate QoL,[1,2] and need to be quantified in Pakistan's settings. Apart from the chronicity of many ailments, demographic factors also play a role.[3] Chronic illnesses are known to take a toll on patients,[4] with multiple illnesses found to decrease an individual's QoL, such as hypertension,[5] diabetes mellitus6, Chronic Suppurative Otitis Media (CSOM),[7] chronic dermatological and psychiatric conditions,[8,9] as most of these illnesses compromise QoL not just physically, but also psychologically and socially. In order to assess the overall QoL of an individual, pain perceived, treatment dependence, energy levels, mental health, and inter-personal relationships need to be assessed.[10] In this study, QoL was determined in several chronic illnesses in Pakistan, to compare severity of impairment and identify associated demographic factors. Four chronic illnesses from internal medicine, otorhinolaryngology, dermatology, and psychiatry were among the various factors associated with inferior QoL in the patients studied.

METHODOLOGY

This analytical cross-sectional study was carried out over five months at CMH Kharian, Pakistan, from October 2020 to February 2021, after gaining approval of the institutional ethical committee (Ref.6/2020, dated 15th October 2020). By using non-probability consecutive sampling, a total of 512 participants were selected when they presented to the various different outpatient departments, admitted in the respective wards, or visiting the primary care clinic of the same hospital. Sample size was calculated using online Raosoft calculator, taking confidence interval 95% and margin of error 5%, after which estimated sample size came out to be 385 individuals.

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Received: 01 Apr 2021; revision received: 03 Nov 2024; accepted: 22 Jan 2025

Inclusion Criteria: Patients who were aged 18 years or above, diagnosed by one of the above clinical specialties, belonging to either gender, and having no psychiatric co-morbidity were included.

Exclusion Criteria: Patients below the age of 18 and not diagnosed by any of the above clinical specialties and diagnosed with a comorbid psychiatric illness were excluded.

The World Health Organization, QoL-BREF (WHOQoL-BREF),[11] along with a structured proforma including demographic variables, was administered to all participants after obtaining informed, written consent. The self-administered questionnaire had a Likert-scale response recorded as 1 of 5 options by the respondent. The WHOQoL-BREF comprised of 26 items, out of which 24 items fell across the four domains of the individual's perception of QoL in physical (7 items), psychological (6 items), social relationships (3 items), and environmental (8 items) areas11. To interpret participants' QoL in the four domains, WHO recommended cut-off scores based on population norms,[11] were used. Demographic data was evaluated by using descriptive statistical techniques for calculating mean, standard deviation, and frequencies while inferential statistics included one-sample t-test,independent sample t test and ANOVA for exploring the compaison between type of illness among participants and their QoL. All data analysis was performed using Statistical Package for the Social Sciences (SPSS) version 21.00.

RESULTS

A total of 512 participants were enrolled, of whom 113(22.00%) were diagnosed with hypertension, 100(19.50%) with eczema and 100(19.50%) with CSOM, and 99(19.40%) were PHC patients. Of the sample, 260(50.70%) patients were females and 242(47.27%) were males with age ranging from 18-96 years and mean age of 42.10±17.50. Most of the participants were married (n=343, 67.00%), 180(35.20%) were employed while 199(38.80%) were housewives. In terms of qualifications, 158(30.80%) participants had no education, 133(26.00%) reported 1-9 years of education, and 221(43.20%) reported 10 years and above of education. We compared participants' QoL with norms, with results shown in Table-I.

Patients from PHC reported an average level of physical health (p=0.07), psychological wellbeing (p=0.13), and social relationships (p=0.19), however, environmental QoL was lower (p<0.001). Patients having CSOM reported significantly lower levels of QoL related to physical health (p=0.00), psychological wellbeing (p=0.00), and environment (p=0.00), although, an average level in social relationships (p=0.19) while patients suffering from eczema reported significantly lower levels of QoL in all four domains. Patients with hypertension and GAD also reported significantly lower levels of QoL in all four domains. The role of participants' diagnoses in their reported levels of QoL are presented in Table-II, which indicated that patients with different diagnoses reported significantly different levels of QoL on the domain of physical health (p=0.00), psychological wellbeing (p=0.00), and social relationships (p=0.01), however, they reported same level of environmental QoL (p=0.11). Post-hoc analyses revealed that PHC patients reported highest level of physical health, psychological wellbeing, and social relationships while patients with hypertension reported the lowest level of physical health, psychological wellbeing, and social relationships.

Table-I: Patients' Quality of Life Against Cut-Off Scores (n=512)

Parameters	Population Norms	Research Sample	*p*-value
	Cut-off score	Mean±SD	
PHC (n=99)			
Physical Health	73.70	70.80±14.20	0.07
Psychological Wellbeing	70.70	68.10±16.10	0.13
Social Relationships	71.50	73.90±18.80	0.19
Environment	75.10	67.20±18.10	0.00
CSOM (n=100)			
Physical Health	73.70	56.60±16.00	0.00
Psychological Wellbeing	70.70	63.70±11.20	0.00
Social Relationships	71.50	69.10±17.70	0.19
Environment	75.10	68.7±12.50	0.00
Eczema (n=100)			
Physical Health	73.70	55.0±15.30	0.00
Psychological Wellbeing	70.70	62.4±11.50	0.00
Social Relationships	71.50	66.9±18.10	0.01
Environment	75.10	66.8±12.00	0.00
HTN (n=113)			
Physical Health	73.70	46.1±16.70	0.00
Psychological Wellbeing	70.70	57.7±12.00	0.00
Social Relationships	71.50	64.5±19.90	0.00
Environment	75.10	66.5±12.20	0.00
GAD (n=100)			
Physical Health	73.70	54.7±20.30	0.00
Psychological Wellbeing	70.70	58.5±18.70	0.00
Social Relationships	71.50	66.7±19.30	0.01
Environment	75.10	63.2±17.80	0.00

** PHC: Primary Health Care, CSOM: Chronic Suppurative Otitis Media, HTN: Hypertension, GAD: Generalized Anxiety Disorder*

Role of participants' gender in their QoL was assessed as shown in Table-III, where males reported

higher level of physical health ($p<0.001$ related QoL and lower level of environment ($p=0.03$) QoL as compared to females. However, gender differences were not significant in the domains of psychological wellbeing ($p=0.10$) and social relationships ($p=0.36$).

Table-II: Comparison of QoL Among Patients with Different Chronic Illnesses (n=512)

Parameters	PHC (n=99)	CSOM (n=100)	Eczema (n=100)	HTN (n=113)	GAD (n=100)	*p*-value
Physical health	70.88±14.24	56.60±16.0	55.00±15.39	46.14±16.77	54.79±20.37	<0.001
Psychological wellbeing	68.14±16.18	63.73±11.29	62.41±11.53	57.77±12.0	58.51±18.77	<0.001
Social relationships	73.96±18.79	69.17±17.76	66.92±18.10	64.53±19.93	66.73±19.35	<0.001
Environment	67.21±18.12	68.75±12.54	66.88±12.0	66.58±12.20	63.22±17.84	0.11

** PHC: Primary Health Care, CSOM: Chronic Suppurative Otitis Media, HTN: Hypertension, GAD: Generalized Anxiety Disorder*

Table-III: Gender Differences and QoL (n=510)

Parameters	Study Groups		*p*-value
	Males (n=250)	Females (n=260)	
Physical health	59.3±19.13	53.4±17.4	< 0.001
Psychological wellbeing	62.98±15.30	60.89±13.93	0.100
Social relationships	67.26±19.10	68.77±18.84	0.36
Environment	65.14±14.97	67.89±14.59	0.03

Age of the participants was significant and negatively related with all domains of QoL where physical health, psychological wellbeing, social relationships, and environment all decreased as age increased as shown in Table-IV. Participants' educational level was also significant and positively associated with all domains of QoL which signified that when the level of education increased, participants' QoL in all areas also increased.

Role of occupation on participants' QoL was assessed and results are presented in Table-V, where participants' occupation influenced their physical health ($p<0.001$) and psychological wellbeing ($p<0.001$) but their social relationships ($p=0.17$) and environment related QoL ($p=0.16$) were not influenced.

Rural and urban comparison in patients' QoL was also done which suggested that participants with urban background reported higher score on the domains of physical health ($p<0.001$) and psychological wellbeing ($p<0.001$) as compared to rural patients. However, no differences were found between urban and rural individuals in their QoL related to social relationships ($p=0.92$) and environment ($p=0.08$).

DISCUSSION

The study findings revealed that all patients except the PHC cohort reported significantly lower level of QoL, in the domains of physical health, psychological wellbeing, social relationships, and environment, however, patients with CSOM in Egypt reported relatively better QoL only in physical domain (Mean=64.40±9.50) but lower QoL in psychological wellbeing (Mean=62.10±7.60), social (Mean=65.20 ±10.70) and environmental (Mean = 56.10 ±11.40) domain as compared to our sample,[12] unlike PHC patients in Brazil who reported lower level of QoL in all areas: physical (Mean = 63.0 ±17.7), psychological (Mean = 67.7 ±15.1), social (Mean = 68.85 ±19.05), and environment (Mean = 53.4 ±15.1) as compared to our sample but their highest score was still in social domain and lowest score in environmental domain, consistent with our findings.[13] Patients with psoriasis reported lower level of QoL in all areas as compared to our sample, but, consistent with our findings, their scores were lower on physical and psychological domains as compared to social and environmental domains.[14] According to another study, patients with hypertension reported higher physical health (Mean = 54.7 ±14.9) but lower psychological wellbeing (Mean =

Table-IV: Correlations between Patients' Age and Education and their QoL (n=512)

		Physical Health	Psychological Wellbeing	Social Relationships	Environment
Age	Pearson Correlation	-.35**	-.17**	-.15**	-.12**
	Sig. (2-tailed)	.00	.00	.00	.01
Education (Years)	Pearson Correlation	.42**	.25**	.10*	.10*
	Sig. (2-tailed)	.00	.00	.02	.03
	N	511	511	511	511

Table-V: Role of Occupation in Participants' Quality of Life (n=512)

Parameters	Employed (n=182)	Unemployed (n=92)	Housewives (n=206)	Students (n=31)	*p*-value
Physical health	63.40±18.32	51.57±17.34	50.98±16.82	65.03±16.87	0.00
Psychological wellbeing	65.13±15.58	58.72±15.03	59.81±13.11	67.74±13.31	0.00
Social relationships	69.37±18.99	64.30±19.72	68.86±18.43	66.90±20.28	0.17
Environment	65.64±15.60	64.54±13.93	67.72±13.56	69.68±19.55	0.16

49.4 ±12.7) and environment (Mean = 59.5 ±10.4) related QoL as compared to our sample, and equal QoL in the social (Mean = 64.1 ±14.1) domain.[15] Patients undergoing psychiatric treatment reported better QoL in physical (Mean = 55.4 ±14.1) and environmental (Mean = 71.7 ±15.4) domains but lower in psychological (Mean = 56.8 ±15.7) and social (Mean = 54.02 ±27.3) domains as compared to our findings.[16] According to our findings, males reported better QoL in physical health domain while females reported better QoL in environmental domain but one author 12 reported no significant gender differences in all areas of QoL in patients diagnosed with CSOM. On the other hand, another study15 reported significant gender differences in all areas of QoL among hypertension patients. In another study,[17] males reported higher QoL in physical health as compared to females, similar to our findings. Additionally, participants' increasing age and rural background were found as risk factors while their higher education as a protective factor for their QoL in our study and previous studies also reported rural resident,[18] and increasing age as risk factors and higher education as a protective factor for patients' QoL.[15]

LIMITATIONS OF STUDY

The cross-sectional design prevents any causal inferences, as it cannot track changes in quality of life over the course of illness. Non-probability sampling introduces selection bias and limits the generalizability of findings beyond the study population. The reliance on a single facility also skews the sample toward a particular demographic, potentially over-representing males. With no random sampling, the participant cohort may not adequately reflect the diversity of adults living with illness across different regions or healthcare systems. Additionally, the study does not appear to account for confounding variables such as disease severity and duration of illness or treatment status, all of which could meaningfully influence QoL scores. The use of self-reported data via the WHO QoL-BREF, while a validated instrument, is still subject to recall bias by respondents.

CONCLUSION

All patients, except from PHC, reported significantly lower level of QoL, with PHC patients' QoL being highest while patients with hypertension reported QoL was lowest. Increasing age and rural background were noted to be risk factors while higher education was protective factor for patients' QoL scores.

Conflict of Interest: None.

Funding Source: None.

Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

SA & SH: Study design, data interpretation, drafting the manuscript, critical review, approval of the final version to be published.

MB & SA: Conception, data analysis, drafting the manuscript, approval of the final version to be published.

MWS: Data acquisition, critical review, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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