# Assessment of health-related quality of life of patients with inflammatory bowel diseases in Eastern Province, Saudi Arabia

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**Summary**    Inflammatory bowel disease patients have impaired quality of life with physical, social and emotional dysfunction. This project aimed to assess the effects of socio-demographic and clinical variables on quality of life and to identify its predictors. In a cross-sectional paper-based study, 50 consecutive non-selected patients attending the teaching hospital completed a disease-specific McMaster quality of life tool. Socio-demographic and clinical data were collected from patients' records. The *t*-test and Mann—Whitney test were used to determine the probability of significant differences between quality of life domains and independent variables. Multiple linear regression was used to determine quality of life predictors. Younger and highly educated patients had higher social scores. Those with shorter disease durations had higher systemic scores. Patients in remission had higher systemic, social, bowel and overall scores. Relapse was a significant predictor of decreased systemic, social, bowel and overall scores. Long disease duration was a significant predictor of decreased systemic and overall scores. Younger age at disease onset was a significant predictor of decreased emotional score. However, high education was a significant predictor of improved social score. Relapse, long disease duration, low education and young age at disease onset were associated with low quality of life. Prospective studies should investigate how interventions addressing these predictors may lead to improved quality of life.

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## Introduction

Inflammatory bowel disease (IBD) refers to chronic inflammatory diseases of the gastrointestinal tract, which include ulcerative colitis and Crohn's disease [1]. IBD commences at any time, but its highest incidence occurs between 15 and 35 years of age [2].

Researchers have addressed the presentation and initial management of Arabs with IBD in Saudi Arabia (SA) [3].

The pattern of the disease is increasing especially among young Saudi men [4,5].

IBD patients have impaired health-related quality of life (HRQOL) with physical, social and emotional dysfunction [6].

HRQOL tools provide subjective yet quantitative assessments of health perception and function in the physical, social and emotional domains, which are distinct from measures of disease activity. HRQOL tools can be used to evaluate the natural history of the disease, catalogue the needs of IBD patients, focus the direction of research and allocation of resources and assess outcome in clinical trials.

Although generic measures of HRQOL permit comparison among disease populations, they may be too imprecise to reflect impairment of function in young IBD patients or to gauge response to therapy [7]. Measuring HRQOL and identifying the variables affecting it is crucial for guiding professionals towards intervention strategies tailored to improving HRQOL.

In SA, most studies have studied the incidence of IBD and its pattern over years [8,9]. This study aimed to assess the effect of sociodemographic and clinical variables on the HRQOL of IBD patients and to identify predictors of QOL.

## Materials and methods

This study was conducted in the gastroenterology outpatient clinic (OPC) and internal medicine department of a teaching hospital in Eastern Province, SA. It was a cross-sectional paper survey. Fifty consecutive non-selected patients with IBD were enrolled. Patients were recruited while receiving their treatment (January—April 2014), and their charts were retrieved to gather disease-related data. Confirmed IBD patients who were adults (teenagers and above) and were willing to participate were included. Patients with ileostomy were excluded. The researchers obtained the Arabic-translated version of the McMaster short IBD questionnaire from McMaster University [10]. {Appendix A for English & B for Arabic version.} It is a disease-specific, validated and reliable tool for measuring HRQOL in adult patients with IBD and contains 10 questions. For each question, there are graded responses on a 7-point Likert scale ranging from one (representing the ''worst'' aspect) to seven (representing the ''best'' aspect). Total IBD questionnaire (IBDQ) scores range from 10 to 70, with higher scores reflecting better well-being. Subsequent validation of the IBDQ yielded a strong correlation with disease severity ($r = -0.5$; $p < 0.001$) and a test—retest reliability coefficient of 0.7. Significant differences also occur between active and inactive disease [10,11]. Patients' QOL data were collected through structured interviews by the study authors.

Another data collection sheet collected demographic data (age, gender, nationality, marital status, education level, smoking habits, etc.) and clinical data {disease duration, age at first diagnosis of the disease (age of onset), and disease activity (remission or relapse), method of treatment (medical or surgical), etc.}. Any surgical intervention performed to treat IBD was considered surgical treatment. However, patients under medical treatment did not receive any surgical intervention concerning IBD at all. Disease activity was classified as relapse or remission based on the charts' documentation. Physicians in the study hospital considered clinical remission as having no bowel symptoms associated with active disease, i.e., no diarrhoea or blood in stools and receiving no acute treatment.

SPSS-V20 was used for data entry and analysis. Four QOL domains (systemic, social, bowel, and emotional) and SumIBDQ (SIBDQ) were computed for data collection tool scoring. The systemic domain was composed of the sum of the responses to Q1 and Q7. The social domain was composed of the sum of the responses to Q2 and Q3. The bowel domain was composed of the sum of the responses to Q4, Q6 and Q9. The emotional domain was composed of the sum of the responses to Q5, Q8 and Q10. Finally, SIBDQ was composed of the sum of the responses to Q1—Q10. Mann—Whitney was used to test the probability of significant differences between QOL domains and the independent variables. Multiple linear regression analysis determined predictors of QOL. A $p$-value of $\leq 0.05$ was accepted. The reliability and validity of the QOL survey was tested.

A pilot study was performed for 10 patients after receiving formal approval. The data collection sheet was revised. Patients gave prior informed consent.