Research Article

Impact Of Health Literacy And Psychological Well-Being On Self-Management Among Patients With Chronic Diseases In Bombay Hospital Of Indore

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Abstract

Background: Chronic diseases such as diabetes mellitus, hypertension, chronic obstructive pulmonary disease, and cardiovascular diseases require lifelong self-management. Health literacy and psychological well-being play important roles in improving patients' ability to manage their conditions effectively. **Objectives:** To assess the health literacy of patients with chronic diseases etc. **Methods:** A descriptive correlational study was conducted using a ample of 30 patients with chronic diseases attending Bombay Hospital in Indore. Convenience sampling was used. Data were collected using demographic variables, a health literacy questionnaire, a psychological well-being scale, and a self-management questionnaire. Descriptive and inferential statistics were used. **Results:** Among the hypothetical sample, 43.3% were aged 51–60 years, 56.7% were male, 36.7% had secondary education, and 50% had diabetes mellitus. Mean health literacy score was 34.6 ± 5.2, psychological well-being 61.8 ± 8.4, and self-management 69.3 ± 9.5. Health literacy showed a positive correlation with self-management (r = 0.63), while psychological well-being also showed a positive correlation (r = 0.58). **Conclusion:** Better health literacy and psychological well-being were associated with improved self-management among patients with chronic diseases.

Keywords: Health literacy, psychological well-being, Self-management, Chronic disease, Indore

Introduction

Chronic diseases are the leading causes of morbidity and mortality worldwide. Effective self-management requires adequate knowledge, motivation, emotional stability, and confidence. Health literacy enables patients to understand medical instructions, medication regimens, and lifestyle modifications. Psychological well-being influences adherence to treatment and healthy behaviors. Assessing these factors helps healthcare professionals design interventions to improve disease outcomes.

Objectives

1. To assess the health literacy of patients with chronic diseases.
2. To assess psychological well-being among patients with Chronic Diseases.
3. To assess self-management practices among patients with Chronic Diseases.
4. To determine the relationship between health literacy, psychological well-being, and self-management.

Research Hypotheses

H_1: There is a significant relationship between health literacy and self-management among patients with chronic diseases.

H_2: There is a significant relationship between psychological well-being and self-management among patients with chronic diseases.

H_3: Health literacy and psychological well-being significantly predict self-management among patients with chronic diseases.

Methodology

A quantitative research approach with a descriptive correlational research design was adopted to assess the impact of health literacy and psychological well-being on self-management among patients with chronic diseases

attending Bombay Hospital in Indore, Madhya Pradesh. The study was conducted among adult patients diagnosed with chronic diseases such as diabetes mellitus, hypertension, chronic obstructive pulmonary disease (COPD), and cardiovascular diseases who were receiving outpatient or inpatient care during the data collection period. A total of 30 participants were selected using a non-probability convenience sampling technique based on the predetermined inclusion and exclusion criteria.

Patients ble to communicate in Hindi or English, and willing to provide written informed consent were included in the study. Patients with acute medical emergencies, severe cognitive impairment, diagnosed psychiatric illness that interfered with communication, or those who were critically ill were excluded from participation.

Data were collected using a structured interview schedule consisting of four sections. Section I included demographic variables such as age, gender, educational status, and type of chronic disease. Section II comprised a standardized health literacy questionnaire to assess participants' ability to obtain, understand, and use health-related information. Section III consisted of a psychological well-being scale that measured emotional and psychological functioning, while Section IV included a self-management questionnaire assessing medication adherence, diet, physical activity, symptom monitoring, and follow-up practices. Prior to data collection, the research instruments were reviewed by experts in medical-surgical nursing, community health nursing, psychology, and biostatistics to establish content validity. The reliability of the instruments was determined through a pilot study, and satisfactory reliability coefficients were obtained.

Ethical approval was obtained from the concerned Institutional Ethics Committee, and administrative permission was secured from the Bombay Hospital before commencing the study. Written informed consent was obtained from each participant after explaining the purpose and procedure of the study. Confidentiality and anonymity of the participants were maintained throughout the research process, and participation was entirely voluntary.

Data collection was carried out over a period of four weeks through face-to-face interviews. Each interview required approximately 20–30 minutes to complete. The collected data were coded, entered into a statistical software package, and analyzed using descriptive and inferential statistics. Frequency, percentage, mean, and standard deviation were used to describe demographic characteristics and study variables. Pearson's correlation coefficient was used to determine the relationship between health literacy, psychological well-being, and self-management.

Data analysis and interpretation

Table 1. Frequency and percentage distribution of Age (n = 30)

Age (years)	Frequency	Percentage
31–40	4	13.3
41–50	8	26.7
51–60	13	43.3
Above 60	5	16.7

Table 1 shows that out of 30 participants, 13 (43.3%) belonged to the age group of 51–60 years, which constituted the largest proportion of the study sample. Eight (26.7%) participants were between 41–50 years of age, while 5 (16.7%) were above 60 years. The remaining 4 (13.3%) participants were in the age group of 31–40 years. The findings indicate that most of the participants were middle-aged adults, reflecting the higher prevalence of chronic diseases in this age group.

Table 2. Frequency and percentage distribution of Gender

Gender	Frequency	Percentage
Male	17	56.7
Female	13	43.3

Table 2 depicts the distribution of participants according to gender. Out of the total sample, 17 (56.7%) were males and 13 (43.3%) were females. The findings reveal that male participants slightly outnumbered female participants in the present study.

Table 3. Frequency and percentage distribution of Educational Status

Education	Frequency	Percentage
Primary	7	23.3
Secondary	11	36.7
Higher Secondary	8	26.7
Graduate	4	13.3

Table 3 illustrates that 11 (36.7%) participants had completed secondary education, representing the highest proportion. Eight (26.7%) had higher secondary education, while 7 (23.3%) had completed primary education. Only 4 (13.3%) participants were graduates. These findings suggest that the majority of the participants had attained secondary-level education.

Table 4. Frequency and percentage distribution of Type of Chronic Disease

Disease	Frequency	Percentage
Diabetes Mellitus	15	50.0
Hypertension	9	30.0
COPD	4	13.3
Heart Disease	2	6.7

Interpretation

Table 4 shows that diabetes mellitus was the most common chronic disease among the participants, affecting 15 (50.0%) individuals. Hypertension was reported by 9 (30.0%) participants, whereas 4 (13.3%) had chronic obstructive pulmonary disease (COPD). Only 2 (6.7%) participants were diagnosed with heart disease. The results indicate that diabetes mellitus constituted the largest disease category in the study population.

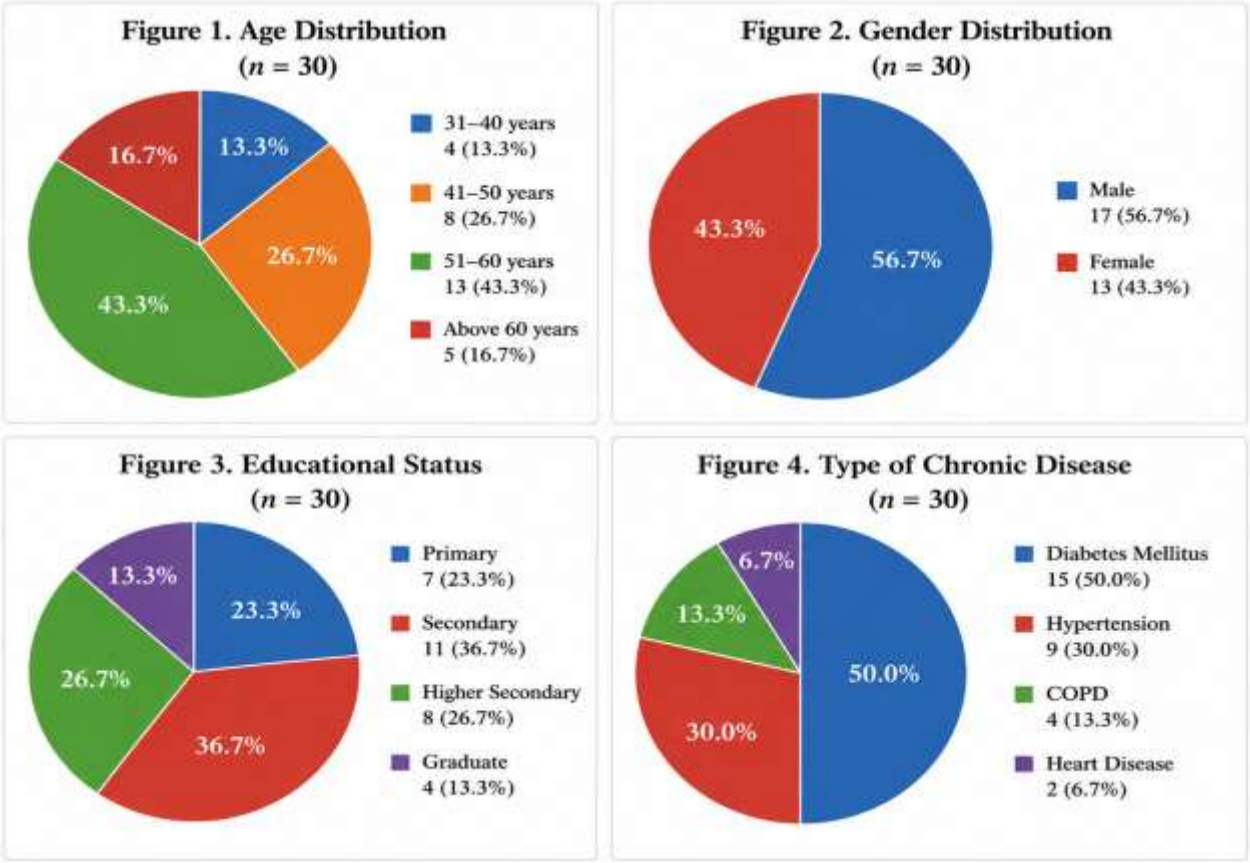


Figure no -1 Pie diagram showing frequency and percentage distribution of all demographic variables

Table 5. Frequency and percentage distribution of Health Literacy Level

Level	Frequency	Percentage
Poor	6	20.0
Moderate	16	53.3
Good	8	26.7

Table 5 indicates that more than half of the participants, 16 (53.3%), had a moderate level of health literacy. Eight (26.7%) participants demonstrated good health literacy, whereas 6 (20.0%) had poor health literacy. The findings suggest that although the majority possessed a moderate understanding of health-related information, a considerable proportion still had inadequate health literacy.

Table 6. Frequency and percentage distribution of Psychological Well-being

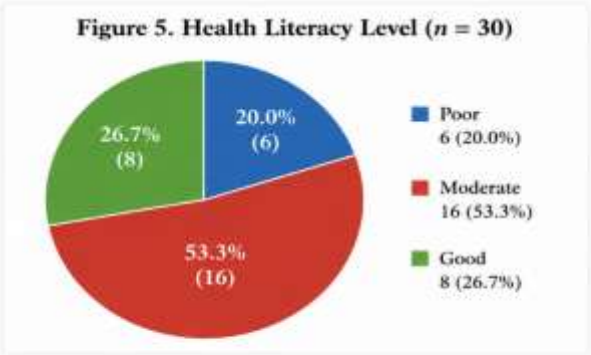
Level	Frequency	Percentage
Poor	5	16.7
Moderate	18	60.0
Good	7	23.3

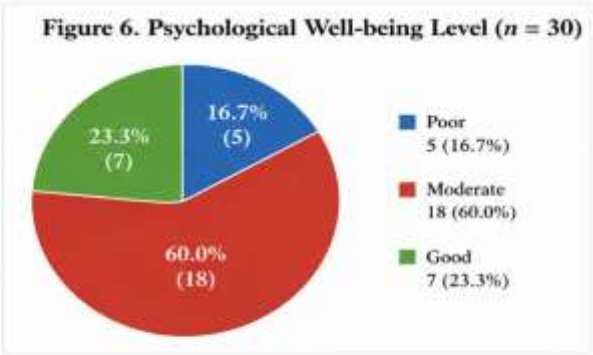
Table 6 presents the psychological well-being levels of the participants. Most participants, 18 (60.0%), had moderate psychological well-being. Seven (23.3%) participants had good psychological well-being, while 5 (16.7%) had poor psychological well-being. These findings indicate that the majority of patients maintained an average level of emotional and psychological health.

Table 7. Frequency and percentage distribution of Self-Management

Level	Frequency	Percentage
Poor	4	13.3
Moderate	17	56.7
Good	9	30.0

Table 7 demonstrates that 17 (56.7%) participants had a moderate level of self-management practices. Nine (30.0%) participants exhibited good self-management, while 4 (13.3%) had poor self-management practices. The findings suggest that most patients were moderately engaged in managing their chronic disease through medication adherence, diet, physical activity, and regular follow-up.





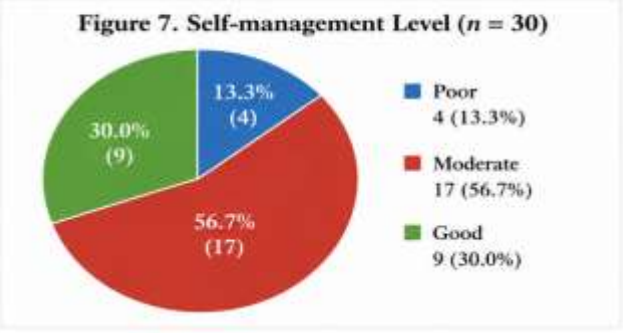


Figure no -2 Pie diagram showing Health Literacy Level, Psychological Well-being and Self-Management

Table no- 8 Descriptive Statistics

Variable	Mean	SD
Health Literacy	34.6	5.2
Psychological Well-being	61.8	8.4
Self-management	69.3	9.5

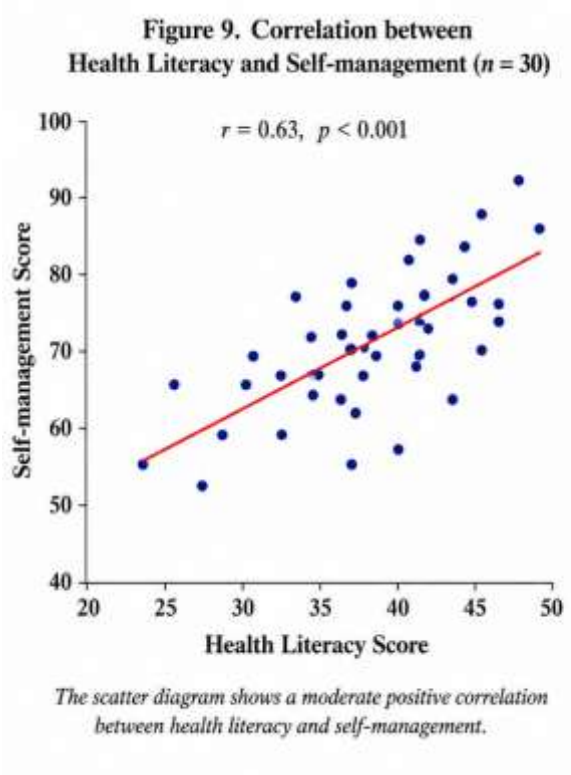
Table 8 shows that the mean health literacy score was 34.6 ± 5.2, indicating a moderate level of health literacy among the participants. The mean psychological well-being score was 61.8 ± 8.4, suggesting an average level of psychological well-being. The mean self-management score was 69.3 ± 9.5, reflecting a moderate level of self-management practices. The standard deviations indicate a moderate variation in the participants' scores across all three variables.

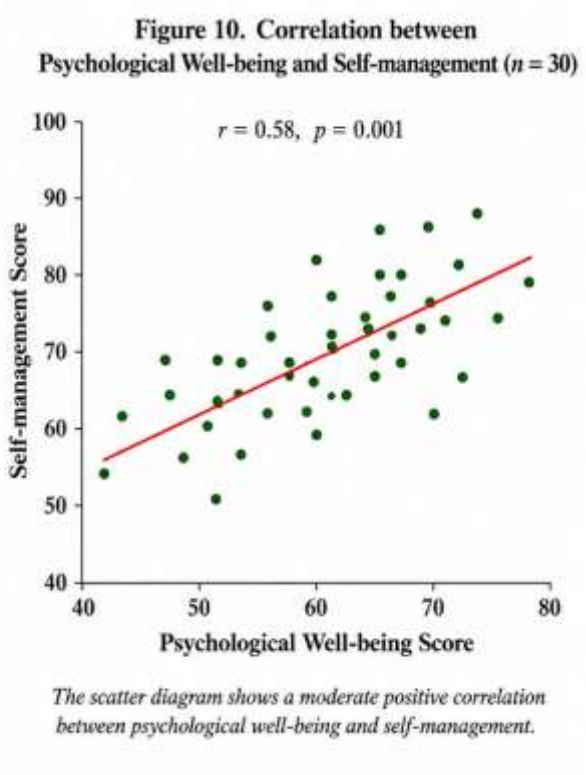
Table no-9 Correlation Analysis

Variables	r value	p value
Health Literacy & Self-management	0.63	<0.001
Psychological Well-being & Self-management	0.58	0.001

Table 9 reveals a moderate positive correlation between health literacy and self-management (r = 0.63, p < 0.001). This finding indicates that participants with higher health literacy tended to demonstrate better self-management practices. The relationship was statistically significant, supporting the view that understanding health information contributes to effective disease management.

Table 9 demonstrates a moderate positive correlation between psychological well-being and self-management (r = 0.58, p = 0.001). This statistically significant relationship suggests that participants with better psychological well-being were more likely to practice effective self-management behaviors. Improved emotional well-being may enhance motivation and adherence to treatment recommendations.





Major Findings

1. Among the 30 participants, the majority (43.3%) belonged to the age group of 51–60 years, followed by 26.7% in the 41–50 years age group, indicating that chronic diseases were more common among middle-aged adults.
2. With regard to gender, 56.7% of the participants were male and 43.3% were female, showing a slightly higher representation of males in the study.
3. Regarding educational status, 36.7% of the participants had completed secondary education, 26.7% had higher secondary education, 23.3% had primary education, and 13.3% were graduates.
4. In terms of disease profile, 50.0% of the participants had diabetes mellitus, 30.0% had hypertension, 13.3% had chronic obstructive pulmonary disease (COPD), and 6.7% had heart disease.
5. Assessment of health literacy revealed that 53.3% of the participants had a moderate level of health literacy, while 26.7% had good health literacy and 20.0% had poor health literacy.
6. The findings on psychological well-being showed that 60.0% of the participants had moderate psychological well-being, 23.3% had good psychological well-being, and 16.7% had poor psychological well-being.
7. Assessment of self-management practices indicated that 56.7% of the participants had a moderate level of self-management, 30.0% had good self-management, and 13.3% had poor self-management.
8. The mean health literacy score was 34.6 ± 5.2, the mean psychological well-being score was 61.8 ± 8.4, and the mean self-management score was 69.3 ± 9.5, indicating overall moderate levels across all three variables.
9. A statistically significant positive correlation was observed between health literacy and self-management ($r = 0.63$, $p < 0.001$), indicating that participants with better health literacy demonstrated better self-management practices.
10. A statistically significant positive correlation was also found between psychological well-being and self-management ($r = 0.58$, $p = 0.001$), suggesting that participants with better psychological well-being were more likely to practice effective self-management.

Result

The present study assessed the impact of health literacy and psychological well-being on self-management among 30 patients with chronic diseases attending selected hospitals in Indore. The demographic findings revealed that the majority of participants (43.3%) were aged 51–60 years, 56.7% were male, 36.7% had completed secondary education, and 50.0% were diagnosed with diabetes mellitus.

Assessment of health literacy showed that more than half of the participants (53.3%) had a moderate level of health literacy, while 26.7% had good health literacy and 20.0% had poor health literacy. Similarly, 60.0% of the participants demonstrated a moderate level of psychological well-being, whereas 23.3% had good and 16.7% had poor psychological well-being.

The findings related to self-management revealed that 56.7% of the participants had a moderate level of self-management practices, 30.0% had good self-management, and 13.3% had poor self-management. The mean health literacy score was 34.6 ± 5.2, the mean psychological well-being score was 61.8 ± 8.4, and the mean self-management score was 69.3 ± 9.5.

Inferential statistical analysis demonstrated a statistically significant positive correlation between health literacy and self-management ($r = 0.63$, $p < 0.001$), indicating that participants with higher health literacy exhibited better self-management practices. Likewise, a statistically significant positive correlation was observed between psychological well-being and self-management ($r = 0.58$, $p = 0.001$), suggesting that better psychological well-being was associated with improved self-management.

Conclusion

This sample study indicates that health literacy and psychological well-being are positively associated with self-management among patients with chronic diseases. Interventions aimed at improving patient education and psychological support may enhance self-management and health outcomes.

Recommendations

- Conduct health literacy education programs.
- Provide regular psychological counseling.
- Develop nurse-led self-management clinics.

- Conduct studies with larger samples using probability sampling.

Limitations of the Study

1. The study was conducted on a small sample of only 30 participants, which limits the generalizability of the findings.
2. Participants were selected using a non-probability convenience sampling technique, which may have introduced selection bias.
3. The study was carried out in selected hospitals in Indore; therefore, the findings may not be representative of patients with chronic diseases in other geographical areas or healthcare settings.
4. Data were collected using self-reported questionnaires, which are subject to recall bias and social desirability bias.
5. The cross-sectional design of the study assessed participants at a single point in time and did not establish causal relationships between health literacy, psychological well-being, and self-management.

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