EXPLORING HEALTH LITERACY AND FATIGUE LEVELS AMONG INDIVIDUALS WITH MULTIPLE SCLEROSIS

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Abstract

Background: Multiple Sclerosis (MS) is a chronic, progressive neurological disorder that significantly impairs the quality of life and functional ability of affected individuals. It is characterized by demyelination and neurodegeneration, leading to a wide range of physical, cognitive, and emotional symptoms. The aim of study was to evaluate the Health Literacy and Fatigue Levels Among Individuals with Multiple Sclerosis.

Methodology: This descriptive cross-sectional study was conducted at Mayo Hospital Lahore. A total of 100 participants were selected through purposive sampling. Multiple Sclerosis Health Literacy Questionnaire and Modified Fatigue Impact Scale were used to collect data. The collected data were analyzed using SPSS version 25.

Results: The study indicated that majority of participants were female having age over 55. Majority of patients had poor health literacy knowledge and high level of fatigue. There was a statistically significant correlation between health literacy knowledge and fatigue level as p value is 0.0001.

Conclusion: The study suggests that educational sessions should be arranged for multiple sclerosis patients to improve their awareness regarding disease management and to improve daily activities.

INTRODUCTION

Multiple Sclerosis (MS) is a chronic, progressive neurological disorder that significantly impairs the quality of life and functional ability of affected individuals (Claflin et al., 2021). It is characterized by demyelination and neurodegeneration, leading to a wide range of physical, cognitive, and emotional symptoms. A study reported that approximately 75% to 90% reported fatigue symptoms (Bessing et al., 2022). Fatigue is a major challenge for MS patients as

it effects daily functioning and self-management of (Shawli et al., 2019).

Health literacy is vital in effective management of disease, as health related knowledge improve the daily activities of patients (Dehghani, 2024). Individuals with good health literacy knowledge are confident to communicate effectively and showed better adherence to treatment (Zeraatkar et al., 2023).Poor level of health literacy knowledge is associated with poor quality of life and increased treatment cost of patients (Marrie et al., 2014).

Health literacy and fatigue both play a crucial role due to complex nature of disease (Wendebourg et al., 2017). However, there is a lack of research specifically exploring the link between health literacy and fatigue in individuals with MS (Pourhaji et al., 2025).

Methodology

This descriptive cross-sectional study was conducted at Mayo Hospital Lahore. Diagnosed individuals of MS were included in the study. A total of 100 participants were selected through purposive sampling. Data collection involved a structured questionnaire. Health literacy was assessed using the Multiple Sclerosis Health Literacy Questionnaire. Fatigue was measured using the Modified Fatigue Impact Scale. Participants completed the questionnaires during their clinic visits, with assistance provided when necessary to ensure accuracy. Ethical approval was obtained from Mayo Hospital Lahore, and informed consent was taken from all participants prior to data collection. Confidentiality and anonymity were maintained throughout the study. The collected data were analyzed using SPSS version 25.

Results

Table 1. Demographic information of participants

Study Variable	Category	Frequency (F)	Percentage (%)
Age	20-35Years	9	9.0%
	36- 45Years	6.0	6.0%
	46- 55 Years	40	40.0%
	> 55 Years	45	45.0%
Gender	Male	35	35%
	Female	65	65%
Marital Status	Married	44	44%
	Unmarried	56	56%
Residence	Rural	33	33%
	Urban	67	67%

The results showed that majority of participants (45%) were above 55 years of age, followed by 40% in the 46–55 years age group. Only 9% were between 20–35 years, and 6% were aged 36–45 years. In terms of gender, 65% were female and 35% were male. Regarding marital status, 56% were unmarried, while 44% were married. As for place of residence, majority 67% of participants lived in urban areas, and only 33% were from rural areas.

Table 2. Overall Health Literacy knowledge of Multiple Sclerosis patients

Health Literacy	Frequency	Percentage
Poor Health Literacy knowledge	60	60%
Average Health Literacy knowledge	30	30%
Good Health Literacy knowledge	10	10%

Out of 100 participants, the majority (60%) had poor health literacy, 30% had average health literacy, and only 10% demonstrated good health literacy. This indicates that most patients lacked adequate

knowledge related to their condition and may benefit

from targeted educational interventions.

Table 3. Fatigue faced by Multiple Sclerosis patients

Fatigue Level	Frequency	Percentage
Low Fatigue	13	13%
Moderate Fatigue	28	28%
High Fatigue	59	59%

Among the 100 participants, 59% reported high fatigue, 28% experienced moderate fatigue, and only 13% had low fatigue. These results endorse that fatigue is a common issue for the majority of MS patients, highlighting the need for effective fatigue management strategies.

Table4. Association between fatigue and health literacy knowledge

Health Literacy Level	Fatigue Level			X2 Value	P value
	Low Fatigue	Moderate Fatigue	High Fatigue		
Poor	2	10	48		
Average	5	12	13		
Good	6	6	0	28.57	0.0001

The result showed that there is significant association between health literacy and fatigue levels(p=0.0001), indicates that low level of health literacy is strongly linked with fatigue levels of MS patients.

Discussion

This research looked at how health literacy and tiredness are related in patients with Multiple Sclerosis (MS). The findings revealed that those who didn't know much about health were more likely to feel really tired.

Most of the people who took part were men, single, and over 55 years old. They also lived in cities. This age pattern backs up what has been found across the world: MS symptoms tend to become worse as patients get older since the illness is progressive (Bessing et al., 2022). This research featured more men than women, even though MS is more frequent in women across the globe (Warren, 2019).

Most of the people that took part (60%) didn't know much about their health. Abdollahi et al. (2022) found that people with multiple sclerosis didn't have good health literacy skills. Cabellos et al (2018) also supported these findings. Similarly, Van Zanten et al. (2021) reported that 67% MS patients experience fatigue. A study also reported similar findings and reported that MS patients suffer physical and mental exhaustion due to fatigue (Gullo et al., 2019).

The study reported significant association between fatigue level and health literacy knowledge. Jacobs et al. (2017) support these findings. O'Brien (2021) findings are also in line with these findings.

Conclusion

The study concluded that majority of study participants were women and over age 55. Majority of patients had poor health literacy knowledge and high level of fatigue. There was a statistically significant correlation between how well people understood health and how exhausted they were. This suggests that those who didn't know much about health were more likely to be exhausted.

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