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Research Article

Level of Health Literacy and Associated Factors among Adult Admitted Patients at Public Hospitals in Wolaita Zone, Southern Ethiopia, 2023

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Abstract

Background: Health literacy is an individuals' ability to access, process, and utilize knowledge to make informed decisions about their health. While hospitalizations often result from an interplay of complex factors, addressing patients' health literacy can offer a promising avenue for reducing unnecessary admissions. With this in mind, our study sought to investigate the prevalence of limited health literacy and its contributing factors among adult patients admitted to public hospitals in the Wolaita zone of South Ethiopia.

Methods: Institution-based cross-sectional study was conducted among adult admitted patients at public hospitals of Wolaita Zone, South Ethiopia. An interviewer-administered Health Literacy Questionnaire tool assessed patients' health literacy. All statistical analysis was performed using SPSS Windows version 25. Binary logistic regression analysis was conducted to determine the relationship of each independent variable with the dependent variable. All variables with a p-value below 0.25 were entered into a multivariable logistic regression analysis to determine the association between the set of independent variables and the dependent variable.

Results: A total of 473 respondents participated in this study. The majority of the participants were males 260 (54.9%) and 177(36.1%) had a diploma and above. The prevalence of Limited Health Literacy was 64%. Those respondents who were not able to read and write were 4 times more likely to have limited health literacy (AOR = 4.09, 95% CI: 2.16, 7.72) compared to those who are above grade 12 (tertiary). Rural residents were 2 times more likely to have limited health literacy (AOR = 2, 95 %CI: 1.250, 2.897). Female participants were likely to have limited health literacy (AOR 2.62 95% CI: 1.412, 3.952) and those who didn't found medical information via the internet/television (AOR =2.25, CI: 1.31, 3.88) had 2 times likely to have limited Health Literacy.

Conclusion and Recommendation: The prevalence of Limited Health Literacy was 64% and education, rural residency, female gender and finding medical information via the internet/television are significant factors. Concerned stakeholders especially health policy makers should implement strategies to improve the level of health literacy.

Keywords: potassium permanganate; clandestine abortion; necrotic lesion; maternal mortality; unsafe abortion

Introduction

Providing safe, equitable and accessible healthcare is an ongoing challenge for all healthcare providers. Pressure from an aging population, an increase in chronic and preventable diseases, rising healthcare costs and labor shortages, and changing community expectations, growing, hospitals are under unprecedented pressure [1-4] A constant challenge for hospitals is managing admissions for potentially avoidable symptoms, whether or not they were treated outside the hospital. Although the reasons for hospitalization are complex and multifactorial, addressing the health literacy

needs of patients can be a potential strategy to reduce avoidable hospitalizations [5]

Health literacy (HL) is the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and utilize information to improve and maintain health [6]. Health literacy is a multifaceted concept that encompasses all aspects of individuals capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions [7-9].

According to the World Health Organization (WHO) definition: HL is the cognitive and social skills which determine the motivation and ability of individuals to gain access to, aware and use information in ways which improve and maintain health [10]. Health literacy is the achievement of a level of knowledge, skills and confidence to take action by improving people's access to health information, and their capacity to use it effectively [9,11]

An adequate level of health literacy is important to an individual in that it helps them to take responsibility for their own health as well as their family health and community healt [12]. Individuals with limited health literacy face difficulties in understanding items that affect disease treatment such as realizing educational materials, reading appointment and medication labels [13], and may also face challenges when communicate with health care professionals [14]. Other international studies have shown that limited health literacy affects large parts of the population [15,17]

Although it is important for improved health status, individuals with Limited Health literacy are common. A large-Scale Danish survey on health literacy shows that between 8.8% and 20.2% of the entire population find tasks related to understanding health information or engaging with healthcare providers difficult [18]. According to a national survey conducted in United States of America, more than 33% of Americans had Limited Health literacy, and According to the European Health Literacy Survey conducted over eight countries shows that 35% of respondents had Limited Health Literacy, while about 30% of adults in Taiwan had limited Health Literacy [19,20]

Individuals with Limited health literacy were about 3 times more at risk to experience adverse health outcomes [21]. The cost associated with Limited Health Literacy is tremendous, and accounts about 5% of the entire health care cost per annum [22]. Moreover, patients with limited health literacy are at greater risk for poor care and outcomes including lack of awareness about disease, poor personal care, increased hospital admissions, and increased death risk [14,23-25].

According to several research findings, patient sociodemographics and disease features influence the degree of health literacy. In order to increase medication adherence, various patient empowerment initiatives and strategies would be necessary. As a result, healthcare professionals should evaluate their patients' health literacy level and provide information and support that is appropriate for their patients' level of health literacy as well as their personal circumstance [26-28].

Globally, health literacy has been recognized as an essential issue in health research in the past decades. However, given the heavy burden of communicable and non-communicable diseases on Ethiopia, as a developing country, information on the level of health literacy is still lacking. Previous study conducted didn't address clinical characteristics including: number of medical illnesses, family history of medical illness, family members with medical training, accompanied by family to the clinic, and finding medical information on the television or internet. Therefore, the aim of this study was to find the prevalence of limited health literacy and its associated factors among adult admitted patient at public hospitals in Wolaita Sodo zone, Southern Ethiopia.

Methods and Materials

Study design and setting

An institution-based cross-sectional study was conducted from March 24 up to May 25, 2023, at public Hospitals in the Wolaita zone, Southern Ethiopia. Wolaita zonal administration is 380km away from Addis Ababa, which is the capital city of Ethiopia. The annual report for 2020 shows that the Wolaita Zone health department has six administrative towns and 16 woredas with total population of 5,385,782 with an area of 451,170.7 hectares (1,741.980 sq mi) (29). In Wolaita Zone during the study period, there are 6 public hospitals; Wolaita Sodo university referral and teaching hospital (WSUTRH), Bodity Primary Hospital, Gasuba Primary Hospital, Bitana Primary Hospital, Bale Primary Hospital, and Bombe primary hospital. The net sample of 493 was recruited using a proportionate sampling method to each hospital.

Data collection procedure and measurements

Data collection methods included interviewer-administered standardized questionnaires. Before actual data collection, the study instruments were pretested and adjusted accordingly. The data collection instrument consists three sections: Sociodemographic data, clinical characteristics, and Health Literacy Questionnaire (HLQ)(30). The HLQ contents were contextualized to Ethiopian patients.

Sociodemographic and clinical characteristics collected included the participants' age, gender, marital status, education level, occupation, number of medical illnesses, family history of medical illness, family members with medical training, accompanied by family to the clinic, finding medical information on the television or internet, and limitations on activities. The contents of HLQ comprised of five areas; Having sufficient information to manage my health, ability to good health information, understanding health information well enough to know what to do considered as functional health literacy; ability to actively engage with health care providers considered as communicative or interactive health literacy; and appraisal of health information considered as critical health literacy.

According to HLQ the participants were asked to what extent they agree with the statements: understanding health information well enough to know what to do and having sufficient information to manage my health. Accordingly, responded as 1= strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. Participants responded for ability to actively engage with health care providers, appraisal of health information, and ability to good health information as 1 = cannot do, 2 = very difficult, 3 = quite difficult, 4 = quite easy, and 5 = very easy. As it was normal data distribution, the cut-offs to define "adequate health literacy" was determined considering those patients who scored mean and above mean and otherwise as "limited health literacy" [31].

Statistical analysis

The collected data were entered to Epi-Data Manager version 3.1, checked and coded, and then exported into Statistical package for social sciences (SPSS) version 25. Descriptive statistics such as frequencies, percentages, means, standard deviations, and crosstabs were applied to summarize data. Binary logistic regression was done to determine the relationship of each independent variable with the dependent variable. All variables with a p-value below 0.25 were entered into a multivariable logistic regression analysis to determine the association between a set of independent variables with the dependent variable using a stepwise backward method [32]. The significance was checked using a p-value of 0.05 and a 95% confidence interval. The strength of association was interpreted by using an adjusted odds ratio.

Results

Socio-demographic Characteristics of Respondents

From the total 493 samples, 473 of them participated with a response rate of 96%. Out of 473 participants, 266 [55.8%] were males and 170[44.2%] were females. The age range of the patients was from 25 to 89 years with the mean

age of the respondents was 54 [SD+12.95]. Out of all respondents, 185[36.1%] had a diploma and above followed by149 [29%] who attended secondary education **(Table 1).**

Variables		Frequency	
		N	%
Age	25-34	94	19.8
	35-44	14	2.9
	45-54	206	43.6
	>/= 55	159	33.7
Gender	Male	260	54.9
	Female	213	45.1
Residence	Urban	345	72.9
	Semi-urban	128	27.1
Marital status	Single	52	10.9
	Married	227	48.0
	Divorced	105	22.3
	Separated	89	18.8
Religion	Protestant	253	51.3
	Orthodox	158	32.7
	Muslim	35	8.8
	Catholic	27	7.2
Education status	Unable to read and write	31	7.6
	Able to read and write	34	8.2
	Primary education	90	19.1
	Secondary education	141	29.0
	Diploma and above	177	36.1
Occupation	Farmer	42	8.8
	Daily laborer	32	6.9
	Self employed	78	16.4
	Government employed	139	29.3
	Ngo employed	182	38.6

Table 1: Socio demographic characteristics of patients admitted in hospitals in Wolaita zone, Southern Ethiopia, March 24 up to May 25, 2023. (n=473)

Clinical characteristics of Respondents

From the total 473 respondents, 312 [66%] respondents didn't find medical information on the television or internet and majority [86%] of respondents do not have family members with medical training (Table 2).

Health Literacy of Respondents

From all 473 respondents, the magnitude of the limited health literacy was 64%. Mostly limited health literacy among health literacy question was understands of health information well enough to know what to do **(Table 3).**

HL Questions	Mean	SD	Health Literacy	
			Limited	Adequate
Having sufficient information to manage my health	2.16	1.16	310(65.6%)	163(34.4%)
Appraisal of health information	2.49	1.03	303(64.1%)	170(35.9%)
Understanding health information well enough to know what to do	2.11	1.13	260(72.6%)	130(27.4%)
Ability to good health information	2.36	1.09	311(65.8%)	162(34.2%)
Ability to actively engage with health care providers	2.31	1.06	244(51.6%)	229(48.4%)

Table 3: Health Literacy of Respondents in Public Hospitals of Wolaita Zone, Southern Ethiopia, 2022 (n=473)

Factors Associated with Health Literacy

All independent variables have been considered for the bivariable logistic regression analyses. All independent variables that showed a p-value less than 0.25 in bivariable analyses were considered candidate variables for the multivariable analysis. Those respondents who were not able to read and write were 4 times more likely to have limited health literacy (AOR = 4.09, 95% CI: 2.16, 7.72) compared to those who are above grade 12 (tertiary). Rural residents were 2 times more likely to have limited health literacy (AOR = 2, 95 %CI: 1.25, 2.89). Female participants were 2 times more likely to have limited health literacy (AOR 2.62 95% CI: 1.41, 3.95) and those who didn't found medical information via the internet/television 2.25 (1.31, 3.88) had lower odds of having limited Health literacy **(Table 4).**

Variables	Health Literacy		COR (95%CI)	AOR (95%CI)	P-Value
	Limited	Adequate			
Age					
25-34	11	13	1	1	
35-44	36	68	1.6(0.255,1.537)	1.2(0.69,4.11)	0.249
45-54	83	86	0.8(0.848,2.869)	1.34(0.61,2.94)	0.463
55= >	126	90	0.6(0.709,3.861)	1.27(0.597,2.72)	0.538
Marital Status					
Single	29	33	1	1	
Married	110	127	1.0(0.456,1.595)	0.921(0.49,1.76)	0.793
Divorced	59	56	0.8(0.964,5.864)	1.01(0.57,2.25)	0.716
Separated	58	41	0.6(1.507,44321)	1.31(0.62,2.57)	0.503
Gender					
Male	141	130	1	1	
Female	115	127	1.2(0.847,1.695)	2.62(1.41,4.95)	**0.029***
Education					
Not read and write	197	178	2.4(1.407,4.321)	4.09(2.16, 7.72)	**0.005***
Primary (1-8)	23	25	2.9(0.446,1.495)	0.564(0.29, 1.09)	0.092
Secondary (9-12)	17	6	0.9(0.964,5.964)	0.24(0.45, 3,74)	0.622
Tertiary (above 12)	49	18	1	1	
Residency					
Rural	216	151	2.8(1.510,3.364)	2.47(1.250, 2.897)	**0.001***
Urban	297	73	1	1	
finding medical information via the internet/television					
No	210	102	0.6 (1.43, 5.56)	2.25 (1.31, 3.88)	**0.002***
Yes	200	141	**1**	1	

Table 4: Factors Associated with Health Literacy of Admitted Patients in Government Hospitals of Wolaita Zone, Southern Ethiopia, 2020 (n= 473)

* Statistically significant at $p < 0.05$

Discussion

An adequate level of health literacy is important to an individual in that it helps them to take responsibility for their own health as well as their family health and community health [12]. Individuals with low health literacy face difficulties in understanding items that affect disease treatment such as realizing educational materials, reading appointment and medication labels [13], and may also face challenges when communicate with health care professional [14]. Health literacy is a multifaceted concept with various contributing factors. Importantly, these factors might vary from one setting to another. This is necessary to identify the contributing factors that, in each setup, could become essential pillar of public health programs aiming at improving health literacy [33].

The purpose of this study was to determine the prevalence of limited Health literacy and associated factors among patients admitted at public hospitals of Wolaita zone, Southern Ethiopia. The result showed that the prevalence of limited Health literacy was 64%. The findings of this study were similar to a study conducted among adult admitted patients in government hospitals of West Shoa Zone, Ethiopi[34], and Jimma Medical Center, Ethiopia;[35]. Where as in this study the prevalence of limited health literacy is slightly lower when compared with the study conducted in the University of Gondar Comprehensive Specialized Hospital [36].

In this study level education of was significantly associated with limited health literacy. Those respondents who were not able to read and write were 4 times more likely to have limited health literacy (AOR = 4.09, 95% CI: 2.16, 7.72) compared to those who are above grade 12 (tertiary). This finding is similar with a study done in government hospitals of West Shoa Zone, Ethiopia(34), Jimma Medical Center, Ethiopia;[36] and consistent with the study conducted in Nigeria[37]. Those respondents from urban residency were 2 times higher levels of health literacy when compared to rural residents. Similarly, study conducted in Southern Illinois University School of Medicine showed that rural residents had lower levels of health literacy compared to urban population [38]. This might be due to that urban residents have great access to health information than those from rural residents.

Female participants were 2 times more likely to have limited health literacy (AOR 2.62 95% CI: 1.412, 3.952), these finding requires additional in-depth study. This study did not find a significant predictive association between age of respondents and health literacy in contrast to previous studie[34,39].

Among from different clinical characteristics, finding medical information via television/internet was significantly associated with health literacy. Thus, who didn't find medical information via the internet/television (AOR =2.25, CI: 1.31, 3.88) had 2 times likely to have limited Health literacy. This finding was supported by the study conducted in Malaysia [40].

Conclusion and Recommendation

Our study found that there is high prevalence in limited health literacy. We didn't find any association between limited health literacy and age of respondents. However, level of education, female gender, being rural resident and finding medical information via the internet/television were significantly associated with limited health literacy. Strategies to address these are needed to reduce limited health literacy. Disparities in health literacy between educated and uneducated as well as in urban and rural residents should be minimized to the lowest possible level. We recommend that future researcher to implement qualitative and interventional study in which, this study didn`t address it due to resource and other associated constraints.

Ethical approval and consent to participate

We obtained ethical clearance from the Ethical review committee of College of Health Sciences of Wolaita Sodo University with a reference number WSU/R/37/1971/23. Written informed consent was obtained from respondents during data collection after explaining the purpose of the study and the benefits. Ethical review committee has approved this consent. Respondents were interviewed voluntarily by assuring confidentiality.

Consent for publication

Not applicable

Availability of data and material

The datasets used and/or analyzed during the current study are available from the corresponding author.

Author Contributions

EE, CK and TT conceptualized the study; EE, MG and TG analyzed the data; EE interpreted the data and wrote the first draft of the manuscript; EE, BA, and KA reviewed and substantively revised the manuscript. All authors read and approved the final manuscript. We authors read and confirmed to submit the journal and gave the final approval of version to be published, and agreed to be accountable for all aspect of the work.

Conflict of interests

The authors have declared that no competing interests exist.

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References

1. Jessup RL, Osborne RH, Beauchamp A, Bourne A, Buchbinder R. (2017). Health literacy of recently hospitalised patients: a cross-sectional survey using the Health Literacy Questionnaire (HLQ). BMC Health Services Research.;17(1):52.
2. Buchan JM, Naccarella L, Brooks PM. (2011). Is health workforce sustainability in Australia and New Zealand a realistic policy goal? Australian Health Review.;35(2):152-155.
3. Brooks PM, Robinson L, Ellis N. (2008). Options for expanding the health workforce. Australian Health Review.;32(1):156-160.
4. Hill S. (2011). The knowledgeable patient: communication and participation in health: John Wiley & Sons.
5. Falster MO, Jorm LR, Leyland AH. (2016). Visualising linked health data to explore health events around preventable hospitalisations in NSW Australia. BMJ open.;6(9): e012031.
6. Stasinopoulos D, Stasinopoulos I, Pantelis M, Stasinopoulou K. Comparison of effects of a home exercise programme and a supervised exercise programme for the management of lateral elbow tendinopathy. British journal of sports medicine. 2010;44(8):579-583.
7. Dickens C, Piano MR. (2013). Health literacy and nursing: an update. AJN The American Journal of Nursing.;113(6):52-57.
8. Liu C, Wang D, Liu C, Jiang J, Wang X, Chen H, et al. (2020). What is the meaning of health literacy? A systematic review and qualitative synthesis. Family medicine and community health.;8(2).
9. Bourne A, Peerbux S, Jessup R, Staples M, Beauchamp A, Buchbinder R. (2018). Health literacy profile of recently hospitalised patients in the private hospital setting: a cross sectional survey using the Health Literacy Questionnaire (HLQ). BMC health services research.;18(1):1-11.
10. Ishikawa H, Yano E. (2008). Patient health literacy and participation in the health-care process. Health expectations.;11(2):113-122.
11. Sørensen K. Stephan Van den Broucke JF, Doyle G, Pelikan J, Slonska Z, Brand H. (2012). Health literacy and public health: a systematic review and integration of definitions and models BMC Public Health.:12-80.
12. McQueen DV, Kickbusch I, Potvin L, Balbo L, et.al. (2007). Health and modernity: the role of theory in health promotion: Springer Science & Business Media.
13. Schillinger D, Grumbach K, Piette J, Wang F, Osmond D, Daher C, et al. (2002). Association of health literacy with diabetes outcomes. Jama.;288(4):475-482.
14. Baker DW, Gazmararian JA, Williams MV, Scott T, Parker RM, Green D, et al. (2002). Functional health literacy and the risk of hospital admission among Medicare managed care enrollees. American journal of public health.;92(8):1278-1283.
15. Consortium H-E. (2012). Comparative report of health literacy in eight EU member states. The European health literacy survey HLS-EU.
16. Rootman I, Gordon-El-Bihbety D. (2008). A vision for a health literate Canada. Ottawa, ON: Canadian Public Health Association.
17. Kutner M, Greenburg E, Jin Y, Paulsen C. (2006). The Health Literacy of America's Adults: Results from the 2003 National Assessment of Adult Literacy. NCES 2006-483. National Center for education statistics.
18. Bo A, Friis K, Osborne RH, Maindal HT. (2014). National indicators of health literacy: ability to understand health information and to engage actively with healthcare providers-a population-based survey among Danish adults. BMC public health.;14(1):1-12.
19. Kickbusch I, Pelikan JM, Apfel F, Tsouros AD. (2013). The solid facts: Health literacy. Denmark: The World Health Organisation Regional Office for Europe.
20. Liang L, Brach C. (2017). Health literacy universal precautions are still a distant dream: Analysis of US data on health literate practices. HLRP: Health Literacy Research and Practice.;1(4): e216-e230.
21. DeWalt DA, Berkman ND, Sheridan S, Lohr KN, Pignone MP. (2004). Literacy and health outcomes. Journal of general internal medicine.;19(12):1228-1239.
22. Eichler K, Wieser S, Brügger U. (2009). The costs of limited health literacy: a systematic review. International journal of public health.;54(5):313-324.
23. Levinthal BR, Morrow DG, Tu W, Wu J, Murray MD. (2008). Cognition and health literacy in patients with hypertension. Journal of general internal medicine.;23(8):1172-1176.
24. Wolf MS, Gazmararian JA, Baker DW. (2005). Health literacy and functional health status among older adults. Archives of internal medicine.;165(17):1946-1952.
25. Baker DW, Wolf MS, Feinglass J, Thompson JA, Gazmararian JA, Huang J. (2007). Health literacy and mortality among elderly persons. Archives of internal medicine.;167(14):1503-1509.
26. Friis K, Aaby A. (2020). Low Health Literacy and Mortality in Individuals with Cardiovascular Disease, Chronic Obstructive Pulmonary Disease, Diabetes, and

Mental Illness: A 6-Year Population-Based Follow-Up Study.;17(24).
27. Lloyd JE, Song HJ, Dennis SM, Dunbar N,et.al.(2018). A paucity of strategies for developing health literate organisations: A systematic review. PloS one.;13(4): e0195018.
28. Willis CD, Saul JE, Bitz J, Pompu K, Best A, Jackson B. (2014). Improving organizational capacity to address health literacy in public health: a rapid realist review. Public health.;128(6):515-524.
29. Osborne RH, Batterham RW, Elsworth GR, Hawkins M, Buchbinder R. (2013). The grounded psychometric development and initial validation of the Health Literacy Questionnaire (HLQ). BMC Public Health.;13:658.
30. GR ORBRE. Hawkins M. Buchbinder R. (2013). The grounded psychometric development and initial validation of the Health Literacy Questionnaire (HLQ) BMC Public Health.13(1):658.10.
31. Bursac Z, Gauss CH, Williams DK, Hosmer DW. (2008). Purposeful selection of variables in logistic regression. Source code for biology and medicine.;3(1):1-8.
32. Sørensen K, Van den Broucke S, Fullam J, Doyle G, et al. (2012). Health literacy and public health: a systematic review and integration of definitions and models. BMC public health.;12(1):1-13.
33. Dugasa YG. (2022). Level of Patient Health Literacy and Associated Factors Among Adult Admitted Patients at Public Hospitals of West Shoa Oromia, Ethiopia. Patient preference and adherence.;16:853.
34. Gurmu Dugasa Y. (2022). Level of Patient Health Literacy and Associated Factors Among Adult Admitted Patients at Public Hospitals of West Shoa Oromia, Ethiopia. Patient Prefer Adherence.;16:853-859.
35. Tilahun D, Gezahegn A, Tegenu K, Fenta B. (2021). Functional health literacy in patients with cardiovascular diseases: cross-sectional study in Ethiopia. International Journal of General Medicine.;14:1967.
36. Adeomi AA, Adeoye OA, Asekun-Olarinmoye EO, Abodunrin OL, et.al. (2014). Evaluation of the effectiveness of peer education in improving HIV knowledge, attitude, and sexual behaviours among in-school adolescents in Osun State, Nigeria. AIDS research and treatment.
37. Zahnd WE, Scaife SL, Francis ML. (2009). Health literacy skills in rural and urban populations. American journal of health behavior.;33(5):550-557.
38. Jessup RL, Osborne RH, Beauchamp A, Bourne A, Buchbinder R. (2017). Health literacy of recently hospitalised patients: a cross-sectional survey using the Health Literacy Questionnaire (HLQ). BMC health services research.;17(1):1-12.
39. Abd-Rahim SNH, Mohamed-Yassin M-S, Abdul-Razak S, Isa MR, Baharudin N. (2021). The prevalence of limited health literacy and its associated factors among elderly patients attending an Urban Academic Primary Care Clinic in Malaysia. International journal of environmental research and public health.;18(17):9044.

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