ACHSM Asia-Pacific Journal of Health Management shape

CONFERENCE ARTICLE

HOW SOCIO-ECONOMIC AND DEMOGRAPHIC FACTORS AFFECT HEALTH LITERACY? ASSESSMENT OF HEALTH LITERACY LEVEL IN DIFFERENT SOCIOECONOMIC CLASSES IN INDIA

Prema Basargekar, Chandan Singhavi, Trisha Sinkar, Meenu Goel*

K J Somaiya Institute of Management, Mumbai, India

Correspondence: prema@somaiya.edu

ABSTRACT

OBJECTIVE:

The objective of the study is to assess the impact of socioeconomic status based on gender, age group, education, and income level of people on the level of health literacy.

DESIGN AND SETTING:

The study uses the primary data of 380 respondents belonging to various socio-economic classes. It is a cross-sectional study.

RESULTS:

The study shows that the level of health literacy is significantly affected by the educational and income level of the respondents. Health literacy is also uniquely affected by age groups. Few of the nine parameters of health literacy are affected positively in rising age groups and few are affected negatively by rising age-group. The study finds that health literacy is not affected by gender differences.

CONCLUSION:

Health literacy plays a vital role in building the health status of people and helping the effective utilization of healthcare services. It is found that level of health literacy is affected by the socio-economic status of the people. It is the need of the hour to build health literacy in the weaker section of society with the help of policy tools.

2nd International Healthcare Management Conference 2022 - Navigating the New Normal with Focus on Healthcare Accessibility, Innovation and Sustainability

KEYWORDS

Health literacy, Health Literacy Questionnaire, HLQ, Socio-economic parameters.

INTRODUCTION

Health literacy can be defined as the capacity to acquire, understand and use information in ways that promote and maintain good health. [1] Health literacy plays a very crucial role in creating awareness about how to manage your health and use the healthcare system for accessing

good health. It is associated with direct as well as indirect health outcomes. Understanding the level of health literacy existing in various socio-economic strata in India is vitally important to make the health system more robust and supportive to provide access to healthcare services to marginalized segments of the community. The success of public healthcare policies depends on building the health literacy of those for whom the policies are designed to make them aware of these policies and take benefit of the same.

Health literacy represents the cognitive and social skills that determine the motivation and ability of individuals to gain access to, understand, and use information in ways that promote and maintain good health[1]. Low health literacy is often linked with poor socio-economic circumstances. [2] Research shows that there is a positive outcome between health literacy and health outcomes of the people. [3] It also leads to the active participation of people in having better control over their health. [4] Health literacy is also positively associated with preventive healthcare as it leads to better health habits and helps people to navigate the healthcare system more effectively. [5] It is also seen that higher health literacy leads to higher hospital visits and a higher level of vaccination. [6] Low health literacy may cause a higher disparity in health status and health outcomes which is prevailing due to racial, socioeconomic, and cultural barriers. [7] It may also lead to lower oral health [8] as well as unhealthy health behaviors. [9] It is seen that low health literacy among women affects their ability to navigate the healthcare system which gives them lower access to preventive healthcare leading to a lower ability to care for their children. [10] It is also observed that improvement in health literacy through educational programs such as the dissemination of information through booklets and videos improves the health behavior of patients with chronic diseases and leads to better health outcomes. [11]

The research shows that critical health literacy required for navigating the health system is affected by socio-economic status and demographic features. [12] It was found in asthma patients that racial and ethnic minority populations had a significantly lower level of health literacy which affected their disease control, quality of life, and emergency visits to the hospital in a negative way. [13] The relationship between formal education and health literacy is found to be positive. Educated people are more likely to make better use of healthcare services and effectively manage health emergencies. Education also has a long-term impact on increasing or reducing health inequities. [14] Health literacy is also associated with age. In Iran, it was found that the level of health literacy of elderly populations was lower which was reflected in their lower health status and lower utilization of healthcare services. [15] It can be seen that less educated, poor, minority, and elderly populations are likely to have low health literacy on various accounts such as less access to the internet, less access to communicate with healthcare professionals, lack of trust between the patients and healthcare professionals due to differences in socio-economic background, and higher frequency of change in healthcare providers. [16]

Bridging the gap in health literacy requires strategic communication. It can be through integrated marketing communication, education, and building social capital [17] The existing research also suggests that health literacy should be incorporated in school, nursing, and medical education [10], and health literature should be made available in the easier-to-understand language. [16]

Relatively very few studies are made on developing countries like India. Most of them measure technical or disease-related practices of the patients and most of them show a very low level of health literacy. [18] One study shows a very strong positive relationship between maternal health literacy and child nutritional status. [19] One study observes that the health literacy score is very low in India, and it is relatively higher among those who have family physicians to take care of day-to-day healthcare needs. The study also mentions that more than 50 percent of the sample studied of the patients attending tertiary care in hospitals in South India had below-average health literacy. [20] In another study, more than 60 percent of the sample population was found to have low dental literacy. [21]

Existing research mentions that health literacy in India is still at a primary level of acquiring knowledge at the individual level and has not improved to a secondary or tertiary level of acquiring the skill to manage individual health and influencing others to adopt healthy behavior. [22] The existing research throws light on the importance of health literacy in bringing out better health results and a few of the antecedents which impact health literacy. Though there are a few similar studies made in other countries, there is no such study made in India. The Indian health system is unique in its vast scale and diversity. India is the second most populous country in the world. India spends 3.2% of its GDP on public healthcare. The health structure is overburdened due to the prevalence of high disease burden and scarcity

of skilled manpower and other amenities. It has a mixed healthcare delivery system where public healthcare predominantly exists in rural India and caters for primary healthcare. Seventy percent of the market share of the hospital market is controlled by the private sector which prominently exists in urban areas. Along with health inequity in rural and urban India, there is also a high level of variation in health status across the states. Hence this type of study will be useful for academicians as well as for policymakers.

OBJECTIVE:

The purpose of this study is to find out the impact of socio-economic and demographic factors on the level of health literacy in India.

METHODS:

It is a cross-sectional study of 380 respondents across various socio-economic classes from India. The data collection was done during September 2021 to March 2022. It used the Health Literacy Questionnaire (HLQ) developed by Swinburne University, Australia which is approved by World Health Organization. This scale is already used in many countries and cross-cultural validity is already established[2]. The sample size selected is more than 10 times the number of variables[3]. The study used a convenient sampling technique. The reliability of the internal consistency of scale was found out to be 0.92 (Cronbach Alpha). The HLQ instrument assesses health literacy on nine parameters such as 1) Feel understood and supported by healthcare providers, 2) Have sufficient information to manage my health, 3) Actively managing health, 4) Have social support for health, 5) Appraise health information, 6) Ability to actively engage with healthcare workers, 7) Ability to navigate the healthcare system, 8) Ability to find out good health information and 9) Ability to understand health information well enough to know what to do. These nine parameters try to test the perception of the respondents related to what extent they feel equipped to understand and manage the healthcare system and feel supported by the environment. The study used SPSS software (version 20) to do the statistical analysis and draw conclusions.

RESULTS:

DESCRIPTIVE ANALYSIS:

Table 1 gives the demographic profile of the respondents.

TABLE 1: DEMOGRAPHIC PROFILE OF THE RESPONDENTS:

Sr No	Parameter	Categories	Frequency	Percent
1	Gender	Male	191	50.3
		Female	189	49.7
2	Age Group	up to 30 Years	109	28.7
		31 to 50 years	180	47.4
		51 Years and above	86	22.6
		Not reported	5	1.3
4	Education	Up to secondary school education	120	31.6
		Matriculation and undergraduate	72	18.9
		Graduation and post-graduation	188	49.5
5	Income Groups	Up to Rs, 1,00,000 per annum	193	50.8
		Rs. 1,00,001 to 5,00,000 per annum	69	18.2
		Rs. 5,00,001 to Rs, 10,00,000 per annum	48	12.6
		Rs. 10,00,001 and above per annum	66	17.4
		Not reported	4	1.1

[1]https://www.who.int/healthpromotion/about/HPR%20Glossary%201998.pdf

[2]https://healthliteracy.bu.edu/hlq

[3]Nunnally, J. Psychometric Theory (2nd Ed.). New York: McGraw-Hill. Parry, C., & McArdle, J. (1991). An applied comparison of methods for least-squares factor analysis of dichotomous variables. Applied Psychological Measurement, 15(1), 35- 46.Bit eium reperum volesto earum quae nonseca borepero mint assequaerios vento beaquatates et, sint hil etur se

Table 1 reveals that more than 50% are male respondents. The majority of the respondents belong to the middle age group of 31 to 50 years followed by the younger age group. Nearly 50% are graduates or post-graduates. Nearly 51% of the respondents earn a yearly income of up to India Rs. 1,00,000.

INFERENTIAL ANALYSIS:

The research question is "How is health literacy affected by socioeconomic and demographic factors such as gender, age-group, educational level and income-groups?" The data collected was found to be normally distributed. The study uses independent sample T-test and ANOVA to come to conclusions.

TABLE 2: RELATIONSHIP BETWEEN SOCIOECONOMIC AND DEMOGRAPHIC FACTORS AND HEALTH LITERACY:

Sr No	Parameters	Gender	Mean	Education	Mean	Age group	Mean	Income group	Mean
1	Feeling understood and supported by healthcare providers	Male	2.95	Up to the Secondary level	2.91	Up to 30 years	2.84	Up to Rs. 1 lakh	2.95
		Female	2.94	SSC, HSC, Undergraduate	3.12	31 to 50 years	2.96	Rs. 1 to Rs 5 Lakh	2.96
				Graduate and Postgraduate	2.91	51 and above	3.06	Rs. 5 Lakh & above	2.94
2	Having sufficient information to manage my health	Male	2.43	Up to the Secondary level	1.83	Up to 30 years	2.60	Up to Rs. 1 lakh	2.07
		Female	2.31	SSC, HSC, Undergraduate	2.37	31 to 50 years	2.33	Rs. 1 to Rs 5 Lakh	2.64
				Graduate and Postgraduate	2.72	51 and above	2.14	Rs. 5 Lakh & above	2.69
3	Actively managing my health	Male	2.30	Up to the Secondary level	1.61	Up to 30 years	2.58	Up to Rs. 1 lakh	1.86
		Female	2.22	SSC, HSC, Undergraduate	2.12	31 to 50 years	2.19	Rs. 1 to Rs 5 Lakh	2.61
				Graduate and Postgraduate	2.73	51 and above	1.97	Rs. 5 Lakh & above	2.71

4	Social support for health	Male	3.13	Up to the Secondary level	3.16	Up to 30 years	3.04	Up to Rs. 1 lakh	3.13
		Female	3.16	SSC, HSC, Undergraduate	3.26	31 to 50 years	3.17	Rs. 1 to Rs 5 Lakh	3.18
				Graduate and Postgraduate	3.09	51 and above	3.22	Rs. 5 Lakh & above	3.14
5	Appraisal of health information	Male	2.59	Up to the Secondary level	1.99	Up to 30 years	2.77	Up to Rs. 1 lakh	2.19
		Female	2.46	SSC, HSC, Undergraduate	2.41	31 to 50 years	2.46	Rs. 1 to Rs 5 Lakh	2.88
				Graduate and Postgraduate	2.91	51 and above	2.29	Rs. 5 Lakh & above	2.85
6	Ability to actively engage with healthcare workers	Male	3.47	Up to the Secondary level	3.09	Up to 30 years	3.44	Up to Rs. 1 lakh	3.28
		Female	3.39	SSC, HSC, Undergraduate	3.58	31 to 50 years	3.41	Rs. 1 to Rs 5 Lakh	3.62
				Graduate and Postgraduate	3.59	51 and above	3.47	Rs. 5 Lakh & above	3.57
7	Navigating the healthcare system	Male	3.14	Up to the Secondary level	2.46	Up to 30 years	3.22	Up to Rs. 1 lakh	2.71
		Female	2.97	SSC, HSC, Undergraduate	3.10	31 to 50 years	3.01	Rs. 1 to Rs 5 Lakh	3.48
				Graduate and Postgraduate	3.42	51 and above	2.93	Rs. 5 Lakh & above	3.37
8	Ability to find good health information	Male	3.07	Up to the Secondary level	3.09	Up to 30 years	3.22	Up to Rs. 1 lakh	2.58

		Female	2.89	SSC, HSC, Undergraduate	3.58	31 to 50 years	2.92	Rs. 1 to Rs 5 Lakh	3.43
				Graduate and Postgraduate	3.59	51 and above	2.76	Rs. 5 Lakh & above	3.36
9	Understand health information enough to know what to do	Male	3.10	Up to the Secondary level	2.15	Up to 30 years	3.38	Up to Rs. 1 lakh	2.56
		Female	2.96	SSC, HSC, Undergraduate	3.05	31 to 50 years	2.97	Rs. 1 to Rs 5 Lakh	3.56
				Graduate and Postgraduate	3.59	51 and above	2.68	Rs. 5 Lakh & above	3.48

THE RESEARCH FINDINGS ARE AS FOLLOWS:

1. There is no statistical difference between the level of health literacy between males and females.
2. The statistical difference in educational categories is significant for all the nine parameters of health literacy. The mean is rising along with educational level on all the nine parameters.
3. The age-group has a unique relationship with health literacy. The statistical difference as per the age-group is significant for all the parameters except 'The ability to actively engage with healthcare workers'. The mean value is rising along with age groups for two parameters such as i) feeling understood and supported by healthcare workers and ii) social support for health. The mean value is declining with age groups for all the remaining six parameters where the statistical difference is significant.
4. The statistical difference as per income category is found to be significant in eight parameters except 'feeling understood and supported by healthcare providers'.

DISCUSSION:

The present study finds a positive relationship between educational level and health literacy. The finding is in concurrence with the existing literature. The study adds a new dimension related to age-group. It finds that aged population find the healthcare system more supportive and also perceive that they have social support in case of emergencies. On all other parameters such as seeking and appraising health information, navigating health system, etc. the younger population has a more positive perception. The study proves that with higher income, people are getting more resources to access health information, appraise it and navigate the health system in a better way.

CONCLUSIONS:

Health literacy plays an important role in building public health. The present study identifies the role of socio-economic and demographic factors in building it. These factors need to be taken into consideration in planning and designing health policies. The study suggests that more focus on education and policy initiatives to assist elderly population in accessing the information and navigating the health system can bring out positive result.

The study contributes to the literature by helping in understanding how socio-economic and demographic factors affect health literacy in a developing country like India. The limitation of the study is that it pertains to one

state of Maharashtra in India. The conclusions may not directly apply to other states.

RECOMMENDATIONS:

The study has theoretical as well as managerial implications. As the existing research observes there is a very limited study made on health literacy in the Indian context. Hence it adds to the theory of understanding the level of health literacy in the Indian context. The Indian government is gearing up for providing Universal Health Access and making huge investments in public healthcare. It is meant to improve access to healthcare services for the weaker and marginalized sector and to improve the status of public health. Building health literacy through effective communication and awareness programs is the cornerstone for its success.

It is recommended that policymakers should give enough attention to building the health literacy of marginalized sectors to make effective utilization of the health system. It can be done in various ways such as the creation and dissemination of health information in vernacular languages and with videos showcasing promoting healthy habits or helping people understand the early symptoms of any disease and encouraging them to avail health facilities; empowering ground-level health workers to undertake community level training programs to build health literacy, etc. to name a few.

The future research scope will be on understanding how health literacy affects health behavior and identifying innovative ways to improve health literacy for the marginalized population having low educational levels.

References:

1. Nutbeam, D. The evolving concept of health literacy. Social Science & Medicine. 2008 October; 67, 2072-2078.
2. Nutbeam, D. Defining and measuring health literacy: What can we learn from literacy studies? Int J Public Health. 2009 July, 54:303-305. https://doi.org/10.1007/s00038-009-0050-x
3. Schillinger, D. Grumbach, K. Piette, J. Wang, F. Osmond, D. Daher, C. et al. Association of Health Literacy with Diabetes Outcomes; JAMA. 2002 July,288(4), 475-481. DOI: 10.1001/jama.288.4.475
4. Kickbushc, IS. Health literacy: addressing the health and education divide. Health Promotion International. 2001. 16(3), 289-297. http://dx.doi.org/10.1093/heapro/16.3.289
5. Tze G.H, Hosseinzadeh, H., Rahman B., Sheikh, M. Health Literacy and health-promoting behaviors among Australian-Singaporean Communities living in Sydney metropolitan area; Proceedings of Singapore Healthcare, 2018; 27 (2), 125-131. https://doi.org/10.1177%2F2010105817741906
6. Howard, D.H., Sentell, T. & Gazmararian, J.A. Impact of health literacy on socioeconomic and racial differences in health in an elderly population; J Gen Intern Med. 2006; 1, 857–861. doi: 10.1111/j.1525-1497.2006.00530.x
7. Sentell, T., Baker, K., Onaka, A. and Braun, K. Low Health Literacy and Poor Health Status in Asian Americans and Pacific Islanders in Hawai'i; Journal of Health Communication, 2011;16:279-294. DOI: 10.1080/10810730.2011.604390
8. M D'Cruz, A., Shankar, M. Health literacy among Indian adults seeking dental care; Dental Research Journal (Isfahan), 2013 Jan-Feb 10(1), 20–24. DOI: 10.4103/1735-3327.111760
9. Kesavan, R., Prabhakar, R., Chaly, P., Saravanan, N. and Mary, A. Assessment of Oral Health Literacy and its Relationship with Oral Health Related Behaviour and Socioeconomic Status Among Students of a University in Chennai City; Biomedical & Pharmacology Journal, 2019 June, Vol. 12(2),739-746.
10. Shieh, C., Halstead, J. Understanding the Impact of Health Literacy on Women's Health. Journal of Obstetric, Gynecology & Neonatal Nursing. 2009 Sept-Oct; 601-612. https://doi.org/10.1111/j.1552-6909.2009.01059.x
11. Eckman, M., Wise, R., Leonard, A., Dixon, E, Burrows, C., Warm, E. Impact of health literacy on outcomes and effectiveness of an educational intervention in patients with chronic diseases. Patient Education and Counseling. 2012 May; 87, 143-151. https://doi.org/10.1016/j.pec.2011.07.020
12. Furuya, Y., Kondo, N., Yamagata, Z. and Hashimoto, H. Health literacy, socioeconomic status and self-rated health in Japan; Health Promotion International. 2013; Vol. 30 No. 3. DOI: 10.1093/heapro/dat071
13. Curtis, L., Michael, M.S., Wolf, S. The Impact of Health Literacy and Socioeconomic Status on Asthma Disparities. Journal of Asthma. 2012; 49, 2, 178-183 https://doi.org/10.3109/02770903.2011.648297
14. Jansen, T., Rademakers, J., Waverijn, G., Verheij, R., Osborne, R. and Heijmans, M. The role of health literacy in explaining the association between educational attainment and the use of out-of-hours primary care

services in chronically ill people: a survey study; BMC Health Research, 2018 May; 18: 394.

15. Javadzade, F., Sharifirad, G., Radjati, F., Mostafavi, F., Reisi, M., Hasanzade, A. et al. Relationship between health literacy, health status, and healthy behaviors among older adults in Isfahan, Iran. Journal of Education and Health Promotion. 2012 Aug; 1(1):31. DOI: 10.4103/2277-9531.100160
16. Egbert, N., Nanna, K. M. Health Literacy: Challenges and Strategies. The Online Journal of Issues in Nursing. 2009 September; 14, No.3. https://doi.org/10.3912/OJIN.Vol14No03Man01
17. Ratzan, S. Health literacy: Communication for the public good. Health Promotion International. 2001; 16-2; 207-214.
18. Barve, S.S, Joshi, S. A Literature Review of Measurement of Health Literacy in India. Indian Journal of Public Health Research & Development. 2019, May; 10-5, 724-729.
19. Johri, M., Subramanian, SV., Kone, G. K., Dudeja, S., Chandra, D., Minoyan, N., Sylvestre, M., Pahwa, S. Maternal Health Literacy Is associated with Early Childhood Nutritional Status in India. The Journal of Nutrition. 2016 July; 146-7, 1402-1410. https://doi.org/10.3945/jn.115.226290
20. Rathnakar, U P, Belman, M., Kamath, Unnikrishnan, Shenoy K, & Udupa, A.L. Evaluation of health literacy status among patients in a tertiary care hospital in coastal Karnataka, India. Journal of clinical and diagnostic research: JCDR, 2013 November; 7(11), 2551–2554. https://doi.org/10.7860/JCDR/2013/6120.3608
21. D'Cruz, A.M. & Aradhya, M. R. S. Health literacy among Indian adults seeking dental care. Dental Research Journal. 2013 January, Vol 10, Issue 1, 20-24.
22. Barve, S., & Joshi, S. Literature Review of Health literacy in India. Indian Journal of Public Health Research & Development. 2019 May; Vol.10, No. 5, 725-729. http://dx.doi.org/10.5958/0976-5506.2019.01097.0