

ORIGINAL ARTICLE

The Relationship of Health Literacy, Perceived Health Information Need and Preventive Health Related Behavior in Urban Karachi

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ABSTRACT

Objective: To determine the relationship of health literacy with perceived need of health information and health related behaviors in urban population of Karachi.

Study Design: Cross sectional survey.

Place and Duration of Study: Community based study carried out on the students of Institute of Business Management and Ojha Institute of Chest Diseases, Dow University of Health Sciences for four months during February to May 2015.

Materials and Methods: A cross-sectional survey was performed in Karachi using a 33 item validated questionnaire on 100 randomly selected subjects using simple random sampling. Descriptive and analytical data analyses were carried out using SPSS version 20. Linear regression was used to find the association between health literacy and perceived health information needs as well as preventive actions. The information regarding demographics was obtained using dichotomous and multichotomous items, health literacy, perceived health information needs and preventive actions was collected using Likert type scales.

Results: The participants had a mean age of 27.8 ± 8.3 years with at least intermediate level education. The mean health literacy score of respondents was calculated to be 11.14 ± 2.84 on 19 point scale (Range 4-16). On perceived health information needs, the mean score turned out to be 28.27 ± 8.52 on a 51 point scale (Range 13-47). As for preventive health actions on a 48 point scale, the mean score was 21.47 ± 8.61 (Range 8-44). Linear regression analysis showed a weak positive ($r=0.383$) relationship between health literacy and preventive health actions ($\beta=9.25$ $R^2=0.147$, $p < 0.05$), however, a weak negative ($r=-0.306$) relationship between health literacy and perceived information needs ($\beta 38.58$ $R^2=-0.094$, $p < 0.05$).

Conclusion: Health literacy has an association with preventive actions against different diseases, however it also decreases their feeling of need for more health education and may result in a false sense of security. It is important that proper literacy programs must be initiated to increase preventive measures against common diseases in the society, so that the burden and cost of these diseases can be minimized.

Key words: Health Literacy, Perceived Information Needs, Health Related Behaviors.

Introduction

In any society, health literacy plays an important role in maintaining well being as knowledge and practices allow it to stay healthy.^{1,2} It is unfortunate that individuals with low health literacy are generally unaware of potential threats and unable to manage and maintain proper health.³ Therefore, in any community the health prospects of its population depend upon the cognitive awareness about health information.^{4,5} Inadequate health literacy puts the person at a higher risk of getting a disease regardless of the absence of illness.⁶

Health literacy ranges from basic functional level,

where a person is capable of reading and understanding health related material to conceptual level, where he can make informed health choices to improve his quality of life after evaluation of relevant options.⁷⁻⁹ It is believed to be a stronger predictor of health outcomes than socioeconomic status, gender, age and education.^{10,11} Health literacy can be considered a tool for empowerment as it allows one to understand his obligations and rights and helps to become an informed consumer of health services.¹⁰ It has been reported that individuals in rural communities fail to follow physician's direction for maintenance of their health due to lack of functional health literacy.⁶

It is unfortunate that a significant population in Pakistan lives in poverty and is without basic needs and lacks access to basic health facilities.^{12,13} It is evident that this population has very low health literacy despite the government led health literacy programs on vaccination, family planning and other epidemic diseases.^{14,15} The level of health literacy in educated individuals also needs to be assessed.

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Generally, this population is considered an informed consumer of health care services, but the true level of knowledge is unknown.

Since health literacy a strong predictor of health outcomes,^{6,16} this study was designed to identify level of acquired health literacy, perceived health education needs and preventive health measures that the general educated population takes about their health along with relationship between health literacy and preventive health measures to justify the need of health literacy with other factors of well being.

Materials and Methods

A cross-sectional survey was performed in Karachi using a 33 item validated questionnaire for measuring health related attributes (Table I) after permission of investigators from primary study.¹⁷ Sample size was calculated to be 97 using online sample size calculator¹⁸ using 95% confidence level and 10% margin of error. The study subjects were randomly chosen from Institute of Business Management and Ojha Institute of Chest Diseases, Dow University of Health Sciences, by skipping every second subject with the aim of establishing role of health literacy and preventive actions.

Informed consent was taken before filling the questionnaire. Data analysis was carried out using SPSS version 20. Linear regression was used to find the association between health literacy and perceived health information needs as well as preventive actions.

Health literacy was measured on a 19 point scale. Score <9 points was taken as below average, 9 - 13 points reflect above average and scores > 13 was taken as good health literacy. Perceived health information needs were measured on a 44 point Likert type scale perceived health information needs were measured on a 47 point Likert type scale.

Results

The questionnaire was filled by hundred participants (59 females and 41 males). The mean age of the respondents was 27.8± 8.3 (Range 16-78) and all of them were educated to at least intermediate level.

The mean health literacy score of respondents was 11.14 ±2.84 on 19 point scale (Range 4-16). The major source for health related information was reported to be friends and TV/ media.

The perception about health information needs was

Table I: Measured attributes related to Health Literacy, Perceived information needs and preventive health actions

Variable	Attributes
Health Literacy	Language fluency and understanding, Cognitive awareness, Recognition of Symptoms knowledge about adverse health outcomes
Perceived information Needs	Information about maintenance of a health, Information availability self management of health
Preventive Health Actions	Dietary measures to remain healthy, Prevention of prevalent diseases hygiene practices

identified through a series of questions. The mean score turned out to be 28.27 ± 8.52 on a 51 point scale (Range 13-47). Some misconceptions about diet and its impact were noted. Majority of respondents could relate quality of life with the availability of health information. However, a large proportion of population reported to not having enough information about health services available in the country and not having enough information about water and sanitation issues (64% each).

As for preventive health actions on a 48 point scale, the mean score was 21.47 ± 8.61(Range8-44). Majority of respondents expressed need for proper guidance about common diseases such as diabetes (66%) and hypertension (76%). Most of them expressed dissatisfaction about provision of information from their health care providers about the disease (67%) and the medications (66%). The scores are summarized in table II.

Linear regression analysis was performed to explore the relationship between health literacy and preventive actions, which showed a weakly positive

Table II: Scores related to Health Literacy, Perceived information needs and Preventive Health Actions

Variable	Maximum Point on Scale	Minimum Point on Scale	Mean Score	Standard Deviation
Health Literacy	19	4	11.14	2.84
Perceived information Needs	47	13	28.27	8.52
Preventive Health Actions	44	8	21.47	8.61

relationship ($r=0.383$) between health literacy and preventive health actions ($\beta=9.25$ $R^2=0.147$, $p<0.05$) (Fig I) and a weakly negative ($r= -0.306$) relationship ($\beta 38.58$ $R^2=-0.094$, $p<0.05$) between health literacy and perceived information needs (Fig II).

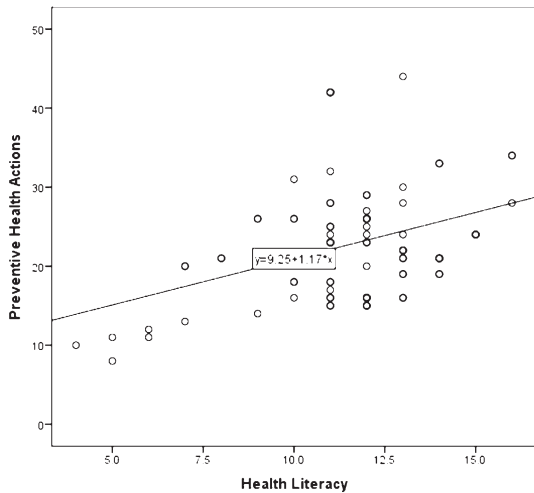


Fig 1: Linear Regression analysis of Health Literacy and Preventive Health Actions.

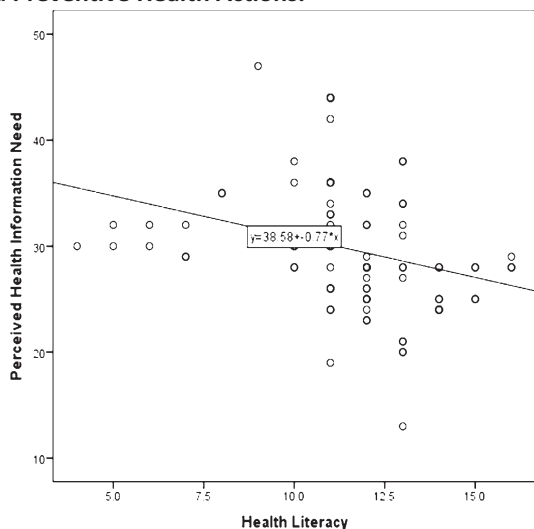


Fig 2: Linear Regression analysis of Health Literacy and Perceived Health Information Needs

Discussion

The study was carried out to find the association between health literacy and perceived health information needs and health prevention activities in the population of Karachi. Our target population was mainly urban and educated. Our findings show health literacy to be an important factor for practicing prevention. This finding has an important implication on designing health literacy programs, as

targeting the educated population with specific information can develop an effect like herd immunity and play an important role in improvement of health status of the society^{19,20} since most of the participants appeared to obtain their health related knowledge from either friends or media, which is not a common phenomenon.¹⁷

Our results also showed that diet related information must be disseminated in a more robust manner as a quarter of the sampled respondents had misconceptions about fat in diet. There was a high proportion of respondents who expressed dissatisfaction about availability of information about relevant health services even from health care providers, which again shows that health promotion and information dissemination system must be improved in the community. It also signifies that care providers must be convinced that they are the most important source of health related information for the general public, and it is their duty to educate the people they treat.

Using Linear regression analysis, it was observed that there is a weak positive correlation between health literacy and preventive health actions, however, the relationship between health literacy and perceived information needs is weakly negative. This shows that health literacy does have a role in encouraging people in taking preventive actions against different diseases, which have been shown earlier.^{5,10,16} However it also decreases their feeling of need for more health education and may result in a false sense of security. In the light of above findings and previous reports from Pakistan,^{13-15,21} it is important that proper literacy programs must be initiated to increase preventive measures against common diseases in the society, so that the burden and cost of these diseases can be minimized.

One of the limitations of this study was limited sample size, which may raise questions regarding generalization of this study, however, randomization may adjust for this issue and it can be safely assumed that it provides a snapshot of the community at this point of time. Our findings strongly suggest that there is a significant information deficit in the educated population of one of the most advanced cities of the country. Therefore it is important to develop proper promotional programs so that the preventive attitude in the community can be

strengthened as this will allow the country to gradually travel towards the international goal of health for all.

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