

Health Literacy: Predictors of Health Seeking Behavior

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Abstract

Objective: To explore the understanding of health literacy among university students, its contribution towards health information and its use. **Results:** Strongest correlation exists between information and manage health ($r = .554, p < .001$), health literacy and ability ($r = .520, p < .001$), and health literacy and social support ($r = .519, p < .001$). The measurements for the standardized regression coefficients β show that information ($\beta=.281, t=4.580, p < 0.000, S.E=0.112$), appraisal ($\beta=.114, t=1.974, p < 0.049, S.E=0.088$), and ability ($\beta=.399, t=6.960, p < 0.000, S.E=0.092$) significantly predicted health literacy although understanding accounts negative effects on health literacy. **Conclusion:** Two predictors: information ($p = .000$), and ability ($p = .000$) contribute significantly to the variance in health literacy. Ability, social support, and information directly related with health literacy that empowered individuals that work as force in active participation to actively engage in health seeking behavior.

Keywords: Health Literacy, feelings, Health Management, Social Support, Appraisal, Ability.

Introduction

Health literacy is the initiative of the United States Department “The Healthy People 2020”. It refers to the individual’s knowledge and ability to read, understand the instructions, find health information, to act upon the information, communication with the health professionals and health care infra structure and actively engage with them, make healthful decisions, to follow doctors’ instructions to manage health issues. Health literacy is now on the top of public health agenda. In Pakistan where adult literacy rate is only 45% (Male 59% and female 57%)¹, generally people have poor health, and chronic diseases are raising fast; there is a great need to focus on health literacy^{2,3}. Dissemination of health information through electronic media is an easy and accessible way to communicate with the public and motivate to adopt preventive measures^{4,5,6,7,8}. Transmission of information and knowledge may enable to understand the usability of health care system and health care interventions, enhance capacity and develop skills for illness preventions, treatment, and disease management⁸.

Other than electronic media, print media may also play a potential role for health education and health promotion. Studies indicated that most of the patients unable to understand basic health care information. Health literacy better equips individuals to take the responsibility of their own health, ability to work them and with the support of others as well as reduces the risks of medical errors and disparities. Prevention and self-care information empower individuals to make choices, take personal health decisions, and follow health care instructions and to overcome the structural barriers of health and health care systems⁹. Sørensen et al. (2004)¹⁰ proposed an integrated model of health literacy which captures the main dimensions of the existing conceptual models (Figure 1).

Health literacy generates knowledge and skills which enable a person to navigate three domains of the health continuum: being ill or as a patient in the healthcare setting, as a person at risk of disease in the disease prevention system, and as a citizen in relation to the health promotion efforts in the community, the work place, the educational system, the political arena and the market place.

In health education and health promotion perspective, this study was conducted to understand the concept of health literacy among young ones that how they navigating with the health care system, to know their abilities to find good health information and use of information for the prevalence of preventable diseases. Lower socio-economic status and low literacy level linked with the higher prevalence and incidence of most chronic and infectious diseases in Pakistan^{11,12}. Due to the increasing incidence of chronic diseases, the understanding of health literacy is becoming important. In the broader social perspective where personal, environmental, and economical factors affecting individuals' health, health literacy may reduce the complexities of the diseases. Patients of chronic illness are more likely to have contact with health systems as they have to manage their illness on daily basis in many ways. Health literacy supports such patients to enhance competency to handle illness. Improving public knowledge and skills is considered a sustainable solution for health and health care. Dissemination of information and knowledge facilitate shifting responsibility and accountability towards public.

2. Research Methodology and Data Used

Cross-sectional survey was conducted from a public sector university. The researcher used purposive sampling method to collect the data by keeping in view 100% accessibility and availability of the respondents.

2.1 Data Sources

Six Departments (Sociology, Social Work, Economics, Mass Communication, English, and Education) from University of the Punjab were used as a main source to obtain the subjects for the study.

2.2 Respondents

In this study 286 questionnaires were filled by the students of six Departments from University of the Punjab (Mean $1.8 \pm$ S.D 1.3) including 98 males (34%) and 188 females (66%) (Mean $0.6 \pm$ S.D 0.5) between ages of 20 to 25 years. All Departments have good number of students in different programs such as B.S Honors, Masters, M.Phil, and Ph.D.

2.3 Instrument

An index of twenty eight item scales was used to measure health literacy such as understanding, information to manage health, active action, social support, appraisal of health information, and ability to actively engage with health providers. Nine items were used to know students knowledge and ability to apply health information.

2.4 Data Analysis

Correlation and Regression were deployed to find out the research goal.

3. Results

3.1 Correlations across variables

Pearson Product-moment correlation coefficient was used to analyze the relationships between the criterion and predictors variables. Table 2 shows that there exists a relatively strong correlation between all variables for health literacy. Strongest correlation exists between information and manage health ($r = .554, p < .001$), health literacy and ability ($r = .520, p < .001$), and health literacy and social support ($r = .519, p < .001$). Data shows moderate positive correlation between health literacy and all other variables except a weakest correlation found between feeling and health literacy ($r = .292, p < .001$) though statistically it is significant at .01 level.

3.2 Multiple Regression Analysis

In Model Summary, $R = .639^a$, R^2 is .408, and the adjusted R^2 is .395; thus this analysis accounted for 40% of the variance. The relationships were examined through Beta weights (standardized regression coefficients) for five variables except manage health as presented in table 4. It can be seen that the ability had the strongest relationship with health literacy ($\beta = .399, t = 6.960, p < 0.000, S.E = 0.092$). Information and appraisal shows although weakest but positive significant relationship with health literacy ($\beta = .281, t = 4.580, p < 0.000, S.E = 0.112$); ($\beta = .114, t = 1.974, p < 0.049, S.E = 0.088$).

The negative coefficients indicate that more the individuals who had poor health literacy interpreted the “feeling that understood and supported by the health care providers’, the less they held themselves responsible for health education. Feelings ($\beta = -.013$, $t = -.232$, $p < .817$, $S.E = 0.112$), social support ($\beta = -.044$, $t = -.694$, $p < .488$, $S.E = .112$) indicates the nature of weak relationship or insignificant role in the health literacy. The measurements for the standardized regression coefficients β in table 4 show that information, appraisal, and ability can significantly predict the health literacy although understanding accounts negative effects on health literacy. The positive coefficients associated with the health literacy shows the more individuals interpreted the health literacy, the more they safe from health risks.

4. Discussion

The results suggest that positive effects in a same way related to health literacy. Positive effects were associated with individuals’ efforts to seek or acquire new information about health and health care services and applying health-related information within the healthcare¹³ although individuals’ efforts may vary in varying age groups over time among gender. It may also vary because of individuals’ motivation, skills and capacities. Important thing is varying conditions of health and illness. Health education enhances knowledge and may bring positive changes in behavior to meet the changing demands of the modern world^{14, 15, 16, 17, 19}.

The negative coefficients indicate that more the individuals who had inadequate health literacy levels have reported significantly less mean than their own health^{20, 21, 22}. They interpreted poorly their feelings that understood and supported by the health care providers’, the less they held themselves responsible or accountable to manage their health^{23, 24, 25}.

Two predictors: information ($p = .000$), and ability ($p = .000$) contribute significantly to the variance in health literacy. Results suggest that information and to manage health are directly enhanced individuals’ ability. Information and use of information both reflected individual’ efforts to actively engage in getting health information and its use, make healthful decisions, and to follow doctors’ instructions. The results of other studies are consistent with the findings of this study^{12, 18, 20}. Social support and ability are highly correlated with health literacy. Feelings show weakest relationship with health literacy although it was positive and significant.

Almost all variables indicate positive and moderate relationships with each other. Positive effects associated with individuals’ efforts for seeking health information and ability for its use. The results of the study suggested that ability, social support, and information are directly related with the health literacy to actively engage in efforts making behavior. Ability and social support mediates and empower individuals that work as force in active participation.

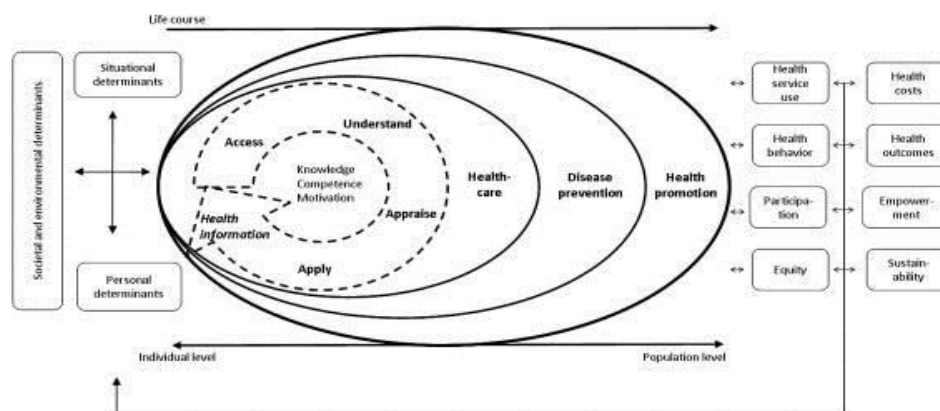
Multiple regression Analysis was applied in terms of goodness of fit model with the study data. Under model test statistics, a significant model emerged. The multiple correlation coefficient of the model R^2 indicates that regression line fairly fits the data and provides a good fit model. The difference between R and R^2 is low, this being an indication of high sampling adequacy. Multivariate analysis results show that ability have the strongest impact on health literacy. Results of this study suggest that understanding and social support although bearing negative impact but show significant impact on health literacy.

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Fig.1



Integrated model of health literacy: Sørensen et al. (2004)

Table 1: Departments and Students

S. No.	Departments	No. of Students		Total
		Male	Female	
1	Sociology	59	140	169
2	Social Work	20	43	63
3	Economics	10	05	15
4	Mass Communication	04	21	25
5	English	02	02	04
6	Education	03	07	10
Total		98	188	286

Table 2: Pearson's correlation between study variables

	1	2	3	4	5	6	7
1. Health Literacy	1.000						
2. Feeling	.292**	1.000					
3. Information	.425**	.448**	1.000				
4. Manage Health	.324**	.369**	.554**	1.000			
5. Social Support	.519**	.321**	.425**	.441**	1.000		
6. Appraisal	.359**	.292**	.354**	.488**	.488**	1.000	
7. Ability	.520**	.415**	.344**	.391**	.464**	.427**	1.000

** . Correlation is significant at the 0.01 level (2-tailed).

** . Correlation is significant at the 0.01 level (1-tailed).

Table 3: Model Summary and ANOVA

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.639a	.408	.395	3.84106		
a. Predictors: (Constant), Ability, Information, Appraisal, Understanding, Social Support, Manage Health						
The analysis of variance (ANOVA) table indicates that overall analysis is significant at the .000 level.						
ANOVAa						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2815.310	6	469.218	31.803	.000b
	Residual	4086.789	277	14.754		
	Total	6902.099	283			
a. Dependent Variable: Knowledge						
b. Predictors: (Constant), Ability, Information, Appraisal, Understanding, Social Support, Manage Health						

Table 4: Measurement of standardized regression coefficient (β) for the predictors of Health Literacy

		Unstandardized Coefficients		Standardized Coefficients	t	p-value
		B	Std. Error (e)	β		
Health Literacy	α	7.059	.955		7.394	.000
Understanding	X1	-.026	.112	-.013	-.232	.817
Information	X2	.576	.126	.281	4.580	.000
Social Support	X3	-.078	.112	-.044	-.694	.488
Appraisal	X4	.174	.088	.114	1.974	.049
Ability	X5	.641	.092	.399	6.960	.000

a. Dependent Variable: Perception Excluded Variable: Manage Health.