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Original Research Article

eHealth - information seeking behaviour among school going adolescents through internet

Somya Thakan*, Aditya Mehta, Lakhan Singh

Department of Community Medicine, Jhalawar Medical College, Jhalawar, Rajasthan, India

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***Correspondence:**
Dr. Somya Thakan,
E-mail: somyathakan@gmail.com

ABSTRACT

Background: Health literacy implies the achievement of a level of knowledge, personal skills, and confidence to take action to improve personal and community health by changing personal lifestyles and living conditions. Thus, health literacy means more than being able to read pamphlets and make appointments. Poor literacy can affect people's health directly by limiting their personal, social, and cultural development, as well as hindering the development of health literacy.
Methods: Analytical cross-sectional study was conducted among school-going adolescents. From six in-depth interviews and a brief paper-and-pencil questionnaire with seventy-nine adolescents. These adolescents were primarily presented with and fulfilled nutrition information needs informal settings such as school.
Results: Average age of school-going adolescents was 12.67 years with a majority of 96% having internet access. The majority of them had sought the help of the internet to gather nutrition information.
Conclusions: Overall, for these adolescents, the nutrition information-seeking process was not an engaging, iterative process. Their nutrition information-seeking behaviours indicated that these adolescents were only at a basic level finding and making sense of nutrition information.

Keywords: eHealth, Adolescents, Nutrition literacy, Internet, Behaviour

INTRODUCTION

eHealth is an emerging field in the intersection of medical informatics, public health, and business, referring to health services and information delivered or enhanced through the Internet and related technologies.[1] Health literacy implies the achievement of a level of knowledge, personal skills, and confidence to take action to improve personal and community health by changing personal lifestyles and living conditions.[2] Thus, health literacy means more than being able to read pamphlets and make appointments. By improving people's access to health information and their capacity to use it effectively, health literacy is critical to empowerment. Poor literacy can affect people's health directly by limiting their personal, social, and cultural development, as well as hindering the development of health literacy.[3] Noting the challenges associated with providing health information and utilizing this definition, Nutbeam interpreted health literacy in a way that emphasized both its individual and communal nature and distinguished among three levels: functional health literacy.[4] At this level, individuals receive basic health information. Interactive health literacy. At this level, individuals develop the skills to act independently on the health knowledge they have received. Critical health literacy. At this level, the individual, as well as the community, have the capacity to act on social and economic determinants of health.

Norman and Skinner developed a model of eHealth literacy that requires six basic skills: traditional literacy, health literacy, information literacy, scientific literacy, media literacy, and computer literacy.[5] In other words, a basic level of each of these literacies is needed to function

optimally in an online health information-seeking situation.[6]

The literacies are divided into two subgroups: analytic (traditional literacy, information literacy, and media literacy) and context-specific (health literacy, scientific literacy, and computer literacy).[7] Analytic literacies require skills that can be applied to a variety of situations, while context-specific literacies require skills that may vary depending on the circumstance (Norman and Skinner, 2006a). For example, a different level of computer literacy may be needed for an individual to gather information about nutrition on his or her home computer than is needed to gather the same information on a computer at the local library.[8] In this example, the individual's traditional literacy (analytic) remains constant across both situations, but that individual's computer literacy (context-specific) may be different for each type of computer used.[9]

METHODS

Analytical cross-sectional study was conducted among school going adolescents of urban area of Jhalawar. The study was conducted after getting ethical approval from institutional ethical board in June to December 2021.

Sample size

Complete enumeration of study participants was considered as a sample size. All study participants included in our study who fulfilled the inclusion and exclusion criteria. So the final sample size was 79.

Selection criteria

We included those who use internet and use it as a tool for information regarding nutrition. Our exclusion included all the adults and primary section children. Along with those who refused to participate were not included in our study.

Data collection and tools

From six in-depth interviews and a brief paper-and-pencil questionnaire with seventy-nine adolescents.[10] These adolescents were primarily presented with and fulfilled nutrition information needs in formal settings such as school and 2) these adolescents used the Internet to fulfill primarily personal needs. Therefore, a conflict existed between the ways they used the Internet and the ways they were presented with a nutrition information-seeking task. Nutrition-specific information literacy, media literacy, health literacy, and scientific literacy, created challenges in stages of the information-seeking process as well. Fundamentally, this affected their overall engagement with online nutrition information and their ability to receive the maximum benefits from the online information-seeking process. Interview data was analysed using a constant comparative technique. The goal of this method was to look for common themes within the discussions as they related to the research objectives and the information-seeking process and examine them throughout the interview transcripts. Thus the interview statements were grouped into categories, conceptualized line by line, and compared to one another. This approach to interview analysis resulted in a discussion of the relationship between adolescents' feelings, actions, and experiences to components in the eNutrition literacy model and stages in the information-seeking process.

Questionnaire data, including eNutrition literacy scores and related opinions about nutrition and the Internet and demographic data were compiled, and the results were used to flesh out the process of nutrition information-seeking, giving special attention to the function of online resources to provide a baseline for the practical application of interview data to provide context for Interview data and eNutrition literacy scores. To give a broader context to the discussions of the interview participants as their discussion data related to their eNutrition literacy skills and their information-seeking process. Ultimately this analysis process resulted in an integrated discussion about the plausible theoretical interrelationships among eNutrition literacy components and information-seeking stages.[11]

RESULTS

The present study was conducted on 79 participants those who use internet as a mode of information seeking for nutrition.

Table 1: Demographics of questionnaire respondents.

Demographics	
Age (years)	Average: 12.67
	Median: 13
	Range: 12-16
Grade in school	7th grade: 25 (32%)
	8th grade: 31 (40%)
	9th grade: 22 (28%)
Gender	Male: 37 (47%)
	Female: 42 (53%)
Religion	Hindu: 64 (82%)
	Muslim: 3 (4%)
	Jain: 10 (13%)
	Christian: 3 (4%)
	Sikh: 5 (5%)
	Buddhism: 5 (5%)
Taken a health class before	Yes: 66 (84%)
	No: 10 (13%)
Age during health class	Average: 12.2
	Median: 12.25
	Range: 10-14
Diagnosed medical condition	Yes: 3 (4%)
	No: 71 (90%)
	I dont know : 5 (6%)

Table 1 shows the demographic profile of study participants. The average age of the study participants was 12.67 years and majority of them were females with Hindu religion being predominant.

Table 2: Adolescents' computer and internet use.

Adolescents who have used the internet: Yes : 76 (96%) ; No : 3 (4%)				
Frequency of internet usage				
Not even once every week: 5 (6%)	1-2 times a week: 9 (11%)	3-4 times a week: 19 (24%)	5-6 times a week: 12 (16%)	Everyday: 33 (42%)
Duration of internet usage				
<15 minutes : 10 (13%)	15-30 minutes: 25 (32%)	30 - 60 minutes: 20 (25%)	1-2 hours: 18 (23%)	>2 hours: 18 (23%)

Table 3: Adolescents' use of the internet for health and nutrition information.

Adolescents 'frequency of looking up health information online				
Never : 28 (35%)	Rarely: 37 (46%)	Occasionally: 11 (14%)	Frequently: 3 (4%)	Always: 0 (0%)
Adolescents 'frequency of looking up nutrition information online				
Never : 28 (33%)	Once or twice 22 (42%)	A few times 18 (23%)	A lot 1 (1%)	Don't know 1 (1%)
Adolescents 'opinions of the usefulness of the Internet in nutrition decisions				
Not at all useful 9 (11%)	Not useful 33 (42%)	Useful 33 (42%)	Very useful 4 (5%)	
Adolescents 'opinions of the importance of being able to find nutrition information online				
Not important at all 5 (6%)	Not important 36 (46%)	Important 33 (42%)	Very important 5 (6%)	

Table 2 shows the usage of internet among school going adolescents and it shows the frequency and duration of study. The frequency was alarmingly high as majority of them used internet everyday (42%). The average duration was quarter to half an hour (32%) for most of the participants.

Table 3 shows basic health seeking behaviour and internet usage among adolescents. This shows their characteristic behaviour of looking up information, esp regarding nutrition.

DISCUSSION

In terms of being able to use the Internet to find nutrition information, there were several areas of eNutrition literacy that presented roadblocks to these adolescents. Fundamentally, their inexperience using the Internet to find nutrition information affected their overall eNutrition literacy.[11] The most prominent effect was on their nutrition- specific information literacy, since their inexperience with finding nutrition information online prevented them from ever developing the specific search strategies to do so.[6] Their inexperience further prevented them from being able to engage in nutrition information, including online nutrition information on any sort of scientific level; as well as from utilizing the media literacy knowledge they did possess in the actual assessment of online nutrition resources.

Notions of literacy can explain skills users have or lack when completing an online nutrition information-search and applying these skills to a process of information-seeking can provide a deeper look at the how adolescents find and making sense of nutrition information. In other words, the literacy skills adolescents have or do not have help explain why they behave in certain ways during the online nutrition information- seeking process and their behaviors during the process itself can describe how, or at what stages adolescents' skills are benefiting or hindering them in seeking nutrition information.[6,7]

Overall, for these adolescents, the nutrition information-seeking process was not an engaging, iterative process. Their nutrition information-seeking behaviours indicated that these adolescents were only at a basic level actually finding and making sense of nutrition information. Specifically, they were being prompted by fulfilling formal, academic needs, guided in their source selection and their ultimate use of the information they did encounter. As a consequence of this they were missing out on exploring a variety of sources of nutrition information on their own, as well as being able to formulate new ideas about the topic and subsequently

return to other stages of the information-seeking process to refine their ideas.

Limitations

Our study had a relatively small sample size and a very narrow geographic area. The limited grades only covered school-aged adolescents; no college students were included. The study was time-restricted, and because to the ongoing epidemic, study participants' availability was confined to the brief period of school opening.

CONCLUSION

The participants did have some strong eNutrition literacy skills throughout the process of online nutrition information-seeking. They could read online information (traditional literacy), although they preferred to read small amounts of it and liked to see important information highlighted in images, charts, graphs, headers, and bolded text rather than bulk text. These adolescents also had a sufficient level of computer literacy to use computers and the Internet to accomplish online information-seeking tasks.

Recommendations

School-aged teenagers currently rely heavily on the internet for nutrition-related information; accordingly, credible and relevant screened material should be made available to them via this medium. Adolescents need to be counselled at the school level about how to use the internet responsibly. In the future, research on the eHealth component among the adolescent age group should be conducted in order to discover the absence of proper internet usage.

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