

Health Information Seeking Behaviour among Teenagers Sri Lanka

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Abstract— In the contemporary era characterized by technological advancements, teenagers are displaying a growing inclination towards acquiring access to health-related information, which is crucial for teenagers to make informed decisions on their overall health and well-being. The findings indicate that the Internet is the primary source of health information, followed by kin and acquaintances, mass media, and medical practitioners among teenagers in Sri Lanka. Gender is a significant factor, as males prefer utilizing mass media and the internet, whilst females tend to rely more on medical practitioners, kinship networks, and friends. Education has a significant impact on teenagers' health information-seeking behaviour; low-education teenagers depend more on kin and acquaintances, while higher-education teenagers are more inclined to utilize the Internet. Moreover, highly physically active teenagers rely on kin and acquaintances, while less active tend to rely on the Internet. The findings of the multinomial regression analysis emphasize that teenagers mostly rely on the Internet and medical experts in Sri Lanka. Education, perceived severity of health conditions, and health efficacy have an impact on these behaviours. This study adds to the body of knowledge regarding the information-seeking behaviours of teenagers, offering significant insights that can inform the progress of customized health promotion strategies and culturally appropriate digital health communication.

Keywords- Teenagers, Health information-seeking behaviour, Health-related information

I. INTRODUCTION

Teenagers in contemporary society reside within an era dominated by digital technology, wherein the acquisition of information is readily accessible. Consequently, they are displaying a growing inclination towards actively pursuing health-related knowledge to make informed decisions pertaining to their overall health (Smith & Brown, 2020; Johnson & Lee, 2019; Rideout et al., 2016). This behaviour can be attributed to several factors, such as the widespread prevalence of digital technology, an increasing emphasis on self-care, and the influence of peers, family, and media on their health information-seeking practices (St. George et al., 2017). Moreover, according to Johnson (2021), teenagers are demonstrating a heightened interest in self-care and taking charge of their individual health. These individuals actively seek knowledge across various domains, encompassing mental health, nutrition, sexual health, and chronic diseases. This endeavour was previously challenging to achieve through traditional means (Brown, 2018). Additionally, teenagers aspire to gain insights into their own physiological systems, medical concerns, and strategies for enhancing their well-being. According to Brown (2018), teenagers are increasingly motivated by a growing inclination for self-care and the management of their personal health.

II. HEALTH INFORMATION SOURCES PREFERRED BY TEENAGERS

In recent years, a notable transformation has occurred in how teenagers search for health-related information. This transformation can be attributed to the extensive integration of digital technologies and the dynamic landscape of healthcare provision (Stoumpou et al., 2023). Teenagers have a wide range of health information sources due to the ubiquity of digital technology such as the Internet and cellphones. Smith and Brown (2020) and Johnson and Lee (2019) have underscored this phenomenon, emphasizing that teenagers

have progressively broadened their avenues for acquiring health-related information. The advent of the digital age has empowered teenagers to assume responsibility for their well-being through the provision of convenient and instantaneous access to a diversity of health-related knowledge. A notable illustration of the significant influence of the Internet on teenagers' information-seeking tendencies is demonstrated in the findings of Rideout et al. (2016), which indicate that a substantial majority of teens between the ages of 14 and 18 (84%), identified the Internet as their main conduit for accessing health-related information. This highlights the pivotal importance of the Internet in the current health information landscape. The internet provides teenagers with the chance to thoroughly explore their health-related questions, which benefit them from reliable health websites, participate in online forums, and benefit from the perspectives of various virtual communities. This represents a notable divergence from conventional channels of health information. The surge in digital health-related content has driven a remarkable boost in accessibility, capturing the increased attention and engagement of teenagers in understanding and managing their health (Brown, 2018). The online health resources empower teenagers to delve deeply into their health inquiries, equipping them to make informed choices about their overall well-being. This enables teenagers to access information on a wide spectrum of topics, including mental health, dietary practices, reproductive health, and chronic medical conditions, which were previously less accessible through traditional means (Johnson & Lee, 2019).

In addition to digital resources, peer networks and social interactions play a pivotal role in the health information-seeking habits of teenagers. As stated by St. George et al. (2017), peers and social networks are substantial sources of health information among teenagers. They often turn to their peers, classmates, and online social circles as forums for discussing health-related topics, seeking advice, and sharing personal experiences. This underscores the significance of

interpersonal communication and peer influence in decision-making processes and behavioural tendencies of teenagers to seek health information.

In the Sri Lankan context, there has been a notable increase in internet connectivity, particularly among the younger demographic. The Information and Communication Technology Agency of Sri Lanka (ICTA) (2020) underscores a significant surge in internet penetration, specifically among younger demographics. The heightened level of connection has resulted in significant transformations in multiple domains of life, encompassing the way teenagers obtain and engage with health-related information. Moreover, the impact of peers, family, and media serves to incentivize further their involvement with health-related information (Johnson, 2021). The impact of familial relationships holds considerable importance within the cultural framework of Sri Lanka. The Sri Lankan society places significant importance on family values, with family members frequently assuming the role of key sources of guidance and support (Perera, 2019). Teenagers may engage in seeking clarification regarding their health-related inquiries by consulting their parents or older siblings while also pursuing supplementary information to augment these discussions. Madara et al. (2019) examine the significance of familial influence on health information-seeking behaviours among teenagers in Sri Lanka.

Furthermore, Smith (2020) asserted that teenagers frequently engage in mutual learning by means of discourse, exchange of information, and participation in social endeavours. In the context of Sri Lanka, a country characterized by robust communal ties, it is common for teenagers to regularly seek advice from their peers regarding matters pertaining to health. Moreover, Fernando et al. (2018) underscored the significant impact of peer networks on the health behaviours and choices of teenagers. The influence of media, encompassing both conventional and digital platforms, is significant in determining the health information-seeking patterns exhibited by teenagers in Sri Lanka. In addition, the proliferation of digital media has increased the accessibility and appeal of health information among teenagers. According to Kanchana et al. (2021), teenagers in Sri Lanka commonly rely on digital platforms, including social media and health websites, as primary sources of health-related information. Conventional media platforms like television and print play a pivotal role in conveying health-related information.

More interestingly, healthcare professionals, comprising doctors, nurses, and counsellors, play a pivotal role in the healthcare ecosystem, especially when it comes to providing teenagers with reliable and personalized medical information. Their role extends beyond simply diagnosing and treating medical conditions. Gunawardena et al. (2017) emphasize that healthcare professionals are esteemed and reliable sources of medical information for teenagers. Teenagers often turn to these professionals for accurate, evidence-based information about various health-related topics.

Thus, based on the above discussion, health information sources can be identified into main types, such as the internet, family, friends and relatives, mass media and healthcare professionals (Rideout et al., 2016; Madara et al., 2019; Fernando et al., 2018; Kanchana et al., 2021; Gunawardena et al., 2017).

III. FACTORS AFFECTING HEALTH INFORMATION SEEKING BEHAVIOR

Davarpanah and Dayani (2006); Kalankesh et al. (2019) explain the complexity of information-seeking behavior, highlighting that it results from intricate interactions. These interactions involve both internal and external factors that exert a significant influence on how individuals seek information. These factors can be broadly categorized into four main groups: (i) Intrapersonal variables, encompass a spectrum of factors, including age, gender, IQ, personal attributes, temperament, emotions, and drive. It also encompasses a wide array of elements such as experience, expertise, information literacy, computer skills, information requirements, and anticipations. (ii) technical elements encompass the user interface, search features, indexing and abstracting methods, information presentation, data display, the availability of guides, and various display parameters within this context. (iii) Cultural and contextual factors significantly influence the information-seeking process. These comprise several factors such as social groupings, cultural and economic characteristics, laws regulating information dissemination, occupation, and demographic considerations. (iv) Content-related variables encompass several factors such as the type of document, file format, size, organization of information, and availability of information sources. These four categories contribute to the complex network of elements that determine how humans seek, engage with, and utilize information in many circumstances. Comprehending the dynamics of information-seeking behaviour necessitates a comprehensive understanding of the interplay among these components.

Age and gender are influential factors in determining the sources individuals rely on for health information (Kassulke et al., 2010). It unveiled a gender discrepancy, as women exhibited a greater inclination towards actively pursuing health information in comparison to men. Although there was no significant variation in the reported health condition based on gender, it was observed that males were more inclined to disclose behavioural risk factors. Furthermore, Escoffery et al. (2005) also noted a greater inclination among female students to pursue health-related information in comparison to their male peers. The gender discrepancy observed in this phenomenon may potentially be attributed to the material featured in health publications, which frequently prioritizes discussions pertaining to the preservation of overall well-being. In contrast, Mokhtar et al. (2009) presented an alternative viewpoint, suggesting a disparity in the level of health concern between young men and young women, with young men displaying a higher degree of care. Furthermore, Oh et al. (2012) have pinpointed age and educational attainment as significant determinants impacting people's inclination to search for health-related information. According to Pálsdóttir (2008), there exists a positive correlation between greater levels of education and the frequency of health information usage. Additionally, those falling within the age range of 18 to 29 exhibit the highest levels of engagement with health information. Young individuals and individuals with higher education levels are actively sought health-related information as compared with elderly individuals with lower levels of education.

A study by Kim (2015) observed that a positive correlation exists between higher educational attainment and individuals'

inclination to participate in online health information-seeking activities. This is reinforced by the substantial influence of physical activity on health information-seeking behaviour. Wang et al. (2013) suggest that individuals with low levels of physical activity are less likely to seek health-related information. Furthermore, Gutierrez et al. (2014) unveiled that individuals with adequate literacy skills are more prone to actively pursue health-related information compared to those with limited literacy skills. Additionally, psychological factors like self-efficacy, perceived susceptibility, and perceived severity of health concerns play a role in shaping individuals' propensity to seek health-related information.

According to Chen and Feeley (2013), people who possess elevated levels of health self-efficacy exhibit greater motivation to acquire knowledge pertaining to health-related topics and shift from a passive to an active approach to obtaining information. The presence of high self-efficacy has been observed to promote proactive behaviour in seeking health information since it diminishes the experience of health-related stress and discomfort. In contrast, the study conducted by Lee et al. (2008) revealed that individuals with low self-efficacy and adverse feelings might experience detrimental effects on their behaviour toward accessing health information. Furthermore, the way individuals perceive their vulnerability to the seriousness of health issues has a direct influence on their inclination to seek out health-related information.

This discussion underscores that teenagers display a wide range of health information-seeking behaviours. Given the context of Sri Lanka, where there is a notable digital gender divide alongside a high literacy rate, it becomes essential to delve into how these behaviours manifest in this environment. Its rich cultural heritage also distinguishes Sri Lanka, and it is common for many teenagers to base their decisions on guidance from their parents. Hence, the objective of this study is to investigate and comprehend the health information-seeking behaviour of teenagers in Sri Lanka. The insights derived from this research will be invaluable for making well-informed strategic decisions that can better cater to the specific needs and preferences of this demographic in the Sri Lankan context.

IV. SIGNIFICANCE OF THE STUDY

Understanding teenagers' health information-seeking behaviour is essential for effective public health promotion. This understanding forms the basis for tailored health promotion strategies that cater to teenagers' unique needs and preferences, fostering healthier lifestyles and enhancing their well-being. Moreover, the cultural and societal context of Sri Lanka significantly influences teenagers' health information-seeking patterns, and understanding these cultural influences is crucial for enhancing health communication methods.

Additionally, the study's findings have the potential to shape policy development. Policymakers and healthcare practitioners can use this research to create policies that provide precise and accessible health information tailored to teenagers. This can foster a culture of informed decision-making and proactive engagement in health management. Overall, this study contributes to the current body of knowledge and has the potential to inspire further research in this important field. This, in turn, can lead to a deeper understanding of the underlying mechanisms, further

enhancing the physical and mental well-being of teenagers in Sri Lanka and other regions.

V. STUDY METHODOLOGY

A. Population and Sample

The present study was undertaken with an emphasis on teenagers residing in Sri Lanka. As per the report of UNICEF (2023), the teenage population in Sri Lanka is currently estimated to be 3,301,210. To ensure a representative sample of the population under study, a sample size of 1200 was determined using the Yamane technique. The study employed a multi-stage cluster sampling approach to select the sample units. This method is particularly suitable when the target population is distributed across vast geographic areas, as it facilitates the inclusion of diverse geographic regions and demographic attributes in a representative way.

B. Conceptual Framework of the Study

In examining the health information-seeking behaviour of teenagers, the study considers various sources of information as dependent variables. These sources encompass the Internet, kin and acquaintances, mass media, medical practitioners, and others. The independent variables of the study are age, gender, methods of information retrieval, educational level, physical activity, health literacy, self-confidence, and the perceived seriousness of health concerns.

The evaluation of physical activity involved the utilization of a questionnaire created by Baecke et al. (1982). Based on that, the questionnaire categorizes an individual's physical activity into three distinct groups, specifically: (i) work-related activity, (ii) involvement in sports, and (iii) participation in recreational activities. For the measurement of health literacy, a questionnaire developed by the Iranian Institute for Health Sciences Research (2017) was employed. This questionnaire gauges health literacy in five domains: reading, accessibility, comprehension, critical assessment, and decision-making. Additionally, ten questions suggested by Gandoy-Crego et al. (2016) were used to measure self-efficacy in addressing health issues on a four-point Likert scale. Perceived severity of health problems was evaluated using a single-item question: "How would having a health problem affect your life?" (National Cancer Institute, 2014).

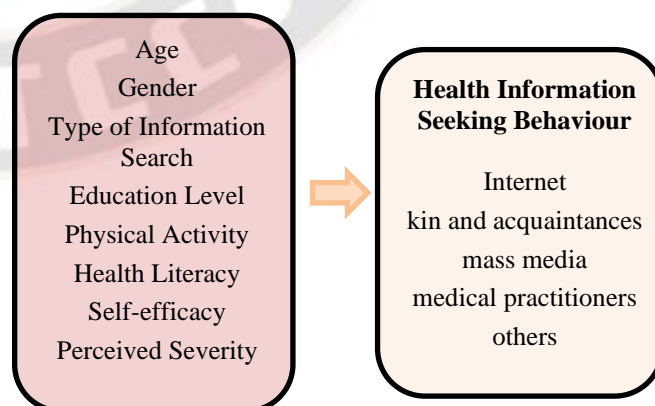


FIGURE I: CONCEPTUAL FRAMEWORK

C. Data Analysis Techniques

The Chi-square test statistic was employed to examine the association between health information-seeking behaviour and independent variables individually. To measure the combined impact on the health information-seeking behaviour, the Multinomial regression Analysis was used.

VI. DATA ANALYSIS AND DISCUSSION

Table I provides a clear overview of the distribution of health information sources used by teenagers. It reveals that the internet emerges as the most favoured source, with approximately 38.4% of the respondents relying on online resources for health-related information. Following closely behind, kin and acquaintances serve as a significant source for health information, with 29.7% of respondents seeking guidance from their personal social networks. In contrast, traditional mass media, such as television and radio, attract 9.7% of respondents, while 20.5% turn to medical practitioners for trusted health information. A smaller fraction of 1.8% mentioned using other sources suggests the existence of various niche or less common sources. These sources may range from specialized publications to unique alternative health practices.

TABLE I: HEALTH INFORMATION SOURCES

Information Source	Frequency	%
Internet	461	38.4
Kin and acquaintances	356	29.7
Mass media	116	9.7
Medical practitioners	246	20.5
Others	21	1.8

The increasing prevalence of online health information-seeking is reflected in the significant dependence on the Internet for accessing health-related information. As noted in studies by Cline and Haynes (2001) and Eysenbach and Köhler (2002), the internet has transformed the accessibility of health information, enabling individuals to explore health topics, symptoms, and treatment options conveniently and comprehensively. Its appeal lies in the resources available, including health websites, forums, and social media platforms.

The importance of acquiring health-related information from family, friendly, and familiar individuals align with the influence exerted by social networks on health-related decision-making processes. The crucial impact of personal networks, particularly in cultures that prioritize familial and social support, has been underscored by Madara et al. (2019) and Fernando et al. (2018). This observation underscores the inclination of individuals to turn to their trusted social circles for guidance, comfort, and insights on health-related topics.

The percentage of participants relying on traditional mass media for health information is relatively limited, reflecting the ongoing evolution of the media landscape. Nevertheless, it is essential to acknowledge that television and radio still play substantial roles in delivering health-related information. As indicated by Chou et al. (2009), mass media retains a significant impact on shaping public health knowledge and viewpoints, primarily through the promotion of health campaigns and expert advice.

A significant portion of individuals who turn to healthcare providers, such as doctors and nurses, for health information reflects the enduring trust placed in medical experts. As per

the study conducted by Gunawardena et al. (2017), healthcare professionals have a pivotal role in providing trustworthy information and specialized healthcare advice, solidifying their position as credible authorities in the healthcare domain. Their involvement in healthcare decision-making and guiding has been emphasized (Emanuel & Emanuel, 1992).

D. Relationship Between Independent Variables and Health Information Sources

The chi-square test statistic was employed to ascertain the presence of a link between independent variables and sources of health information. The chi-square test statistic yielded significant associations between the sources of health information and all independent variables except for age.

TABLE II: HEALTH INFORMATION SOURCES AND GENDER

Health Information Sources	Gender			
	Male		Female	
Internet	196	42.5%	265	57.5%
Kin and acquaintances	134	37.6%	222	62.4%
Mass media	50	43.1%	66	56.9%
Medical practitioners	49	19.9%	197	80.1%
Others	8	38.1%	13	61.9%

$\chi^2_4 = 38.820, p < 0.001$

The results shown in Table II indicate that among males, mass media is the primary source of health information, followed by the internet as the second most popular option. In contrast, it is observed that females tend to display a greater propensity to acquire health-related information from medical professionals, followed by kin and acquaintances as secondary sources. Smith and Johnson (2019) mentioned that males predominantly depend on mass media platforms, such as television, newspapers, and online news sources, as their primary channels for obtaining health-related information. The inclination towards utilizing these sources might be ascribed to their accessibility and extensive availability, rendering them a simple choice for males. Conversely, the internet has garnered substantial traction among male individuals, potentially because of the abundance of information accessible online, encompassing health-oriented websites and discussion platforms. This observation aligns with the patterns revealed in Table II, where it is evident that males tend to rely heavily on mass media and the internet as significant sources of health information. In contrast, a distinct pattern emerges in the selection of health information sources by women. According to research conducted by Williams et al. (2020), females display a preference for medical practitioners, including doctors and nurses, as their primary source of health-related information. This inclination toward healthcare professionals can be attributed to the desire for personalized advice and specialized expertise. Moreover, women frequently place importance on information obtained from their family and friends, likely due to the social support and shared experiences that these sources can offer. The data presented in Table 2 reinforce these findings and suggest a strong association between medical practitioners and family and friends as favoured sources of health information among females.

As depicted in Table III, it is apparent that a considerable number of teenagers predominantly acquire information regarding physical health and development from sources that

are not explicitly specified. Research by Viner et al. (2015) has shown that teenagers frequently employ a variety of resources, including school-based health education programs, literature, and the internet, to explore topics like puberty, sexual health, diet, and exercise. Furthermore, teenagers commonly rely on the internet and mass media as their primary sources for information related to safety measures and interpersonal relationships. According to Livingstone (2008), online tools and media platforms offer valuable information and guidance on subjects such as safe sexual practices, nurturing healthy relationships, and effectively addressing challenges like bullying and peer pressure.

TABLE III: HEALTH INFORMATION SOURCES AND TYPES OF HEALTH INFORMATION SEARCH

Health Information Sources	Types of Health Information Search							
	Physical Health & Development		Safety Relationships		Safety and Special Needs		Mental Health & Emotional Well-being	
Internet	150	32.5 %	120	26.0 %	176	38.2 %	15	3.3 %
Kin and acquaintances	55	15.4 %	58	16.3 %	99	27.8 %	144	40.4 %
Mass media	30	25.9 %	31	26.7 %	41	35.3 %	14	12.1 %
Medical practitioners	52	21.1 %	53	21.5 %	115	46.7 %	26	10.6 %
Others	13	61.9 %	4	19.0 %	4	19.0 %	0	0.0 %

$\chi^2_{12} = 244.909, p < 0.001$

Furthermore, a substantial proportion of teenagers turn to healthcare professionals for guidance regarding safety and specific needs. This inclination aligns with their preference for consulting medical experts when addressing sensitive health issues (Blythe et al., 2019; American Academy of Pediatrics, 2017). Additionally, teenagers often rely on information provided by family and friends to gain insights into their mental health and emotional well-being. Gulliver et al. (2012) and Hoare et al. (2018) emphasize that teenagers seek support and advice from their social networks, including family members and friends, to effectively cope with stress, navigate their emotions, and improve their psychological well-being.

TABLE IV: HEALTH INFORMATION SOURCES AND EDUCATION LEVEL

Health Information Sources	Education Level			
	Ordinary Level		Advanced Level	
Internet	82	22.1%	379	45.7%
Kin and acquaintances	152	41.0%	204	24.6%
Mass media	35	9.4%	81	9.8%
Medical practitioners	90	24.3%	156	18.8%
Others	12	3.2%	9	1.1%

$\chi^2_4 = 70.830, p < 0.001$

As revealed by the results in Table IV, teenagers with an Ordinary Level (O/L) of education are more inclined to rely on family members and friends as their primary source of health-related information. Conversely, those with an Advanced Level (A/L) of education tend to show a greater preference for seeking health-related information from online sources. Research findings suggest that individuals with lower levels of education are more likely to place their trust in and actively seek health-related information from informal sources, such as their social networks, which include family

and friends (Cutrona et al., 2018; Chou et al., 2018). Family members and close friends can provide culturally relevant knowledge and instill a sense of trust, which holds particular significance for individuals with limited educational attainment. This phenomenon is consistent with previous studies that have established a significant correlation between higher levels of education and a greater utilization of online health information resources (Fox, 2011; Kontos et al., 2017). There is a positive correlation between higher levels of education and enhanced digital literacy, as well as the capacity to traverse online sources proficiently.

TABLE V: HEALTH INFORMATION SOURCES AND PHYSICAL ACTIVITY

Health Information Sources	Physical Activity					
	Low		Moderate		High	
Internet	97	46.9%	362	37.3%	2	8.7%
Kin and acquaintances	52	25.1%	294	30.3%	10	43.5%
Mass media	21	10.1%	90	9.3%	5	21.7%
Medical practitioners	31	15.0%	210	21.6%	5	21.7%
Others	6	2.9%	14	1.4%	1	4.3%

$\chi^2_8 = 22.850, p = 0.004$

Teenagers exhibiting greater levels of physical activity demonstrate a greater propensity to seek health-related information from familial and social connections, while those with lower levels of physical activity tend to rely on alternative sources. Teenagers who participate in elevated levels of physical activity may exhibit an increased inclination towards the promotion of health and overall well-being. Individuals may acquire health-related information from their kin and acquaintances as a result of the impact exerted by their social networks. According to Perry et al. (2002), empirical evidence suggests that the influence of peers and family members is of considerable importance in developing health behaviours among teenagers. Teenagers exhibiting reduced levels of physical activity may lack a proximate social network of relatives or acquaintances who actively participate in physical fitness or sports.

TABLE VI: HEALTH INFORMATION SOURCES AND PERCEIVED SEVERITY OF HEALTH PROBLEMS

Health Information Sources	Perceived Severity of Health Problems					
	Very Concerned		Concerned		Not Concerned at all	
Internet	171	37.1%	289	62.7%	1	0.2%
Kin and acquaintances	268	75.3%	85	23.9%	3	0.8%
Mass media	77	66.4%	39	33.6%	0	0.0%
Medical practitioners	149	60.6%	95	38.6%	2	0.8%
Others	13	61.9%	08	38.1%	0	0.0%

$\chi^2_8 = 133.960, p < 0.001$

Teenagers who exhibit elevated levels of apprehension regarding the perceived gravity of health issues demonstrate a greater propensity to acquire health-related information via familial and social connections, whereas those with concerns tend to exhibit a preference for obtaining health information from the Internet.

Based on the results shown in Table VII, it can be observed that every teenager included in the study has a minimum level of health literacy that can be classified as moderate. The findings suggest that teenagers possessing a moderate level of

health literacy demonstrate a greater propensity to seek health-related information from family members and acquaintances.

TABLE VII: HEALTH INFORMATION SOURCES AND HEALTH LITERACY

Health Information Sources	Health Literacy			
	Moderate		High	
Internet	97	21.0%	364	79.0%
Kin and acquaintances	192	53.9%	164	46.1%
Mass media	39	33.6%	77	66.4%
Medical practitioners	59	24.0%	187	76.0%
Others	5	23.8%	16	76.2%

$$\chi^2_4 = 110.750, p < 0.001$$

According to Berkman et al. (2004), empirical evidence indicates that individuals possessing modest health literacy tend to depend on interpersonal relationships as a means of comprehending intricate health-related information. When individuals have health-related questions, they often turn to their family and friends for explanations and assistance. Additionally, those with higher levels of health literacy tend to seek health-related information from online sources. Previous research has indicated that persons with elevated levels of health literacy exhibit a greater propensity to engage in more frequent utilization of digital health resources for the purposes of acquiring information, evaluating health risks, and making well-informed decisions (Chesser et al., 2016). Individuals with a deeper knowledge and comprehension of health-related topics may feel more at ease using online resources to explore a broader range of health-related subjects.

TABLE VIII: HEALTH INFORMATION SOURCES AND HEALTH EFFICACY

Health Information Sources	Health Efficacy			
	Moderate		High	
Internet	353	76.6%	108	23.4%
Kin and acquaintances	327	91.9%	29	8.1%
Mass media	109	94.0%	7	6.0%
Medical practitioners	233	94.7%	13	5.3%
Other	19	90.5%	2	9.5%

$$\chi^2_4 = 68.697, p < 0.001$$

The study's results suggest that teenagers display a range of health efficacy levels, spanning from moderate to high. Those with intermediate levels of health efficacy tend to show a stronger inclination to seek health information from mass media outlets and medical experts. Teenagers with moderate health efficacy possess a basic understanding of health-related issues but may still prefer obtaining information from traditional and trustworthy sources like mass media channels (such as television and newspapers) and healthcare professionals. Individuals may consider these sources authoritative and credible for acquiring appropriate health information, and they may actively seek clarity and comfort from medical specialists regarding the information offered. In contrast, teenagers with a heightened sense of health efficacy tend to exhibit a preference for obtaining health-related information from online sources. Teenagers exhibiting a heightened sense of health efficacy are likely to demonstrate more self-assurance in their capacity to obtain, comprehend, and utilize knowledge pertaining to health. Individuals may prefer obtaining health information from the Internet because of its extensive range of resources and the opportunity it

provides for a thorough investigation. Research findings have demonstrated that people who possess a greater sense of self-efficacy in relation to their health are more inclined to utilize online sources with greater frequency for the purpose of obtaining health-related information. This inclination stems from their belief in their own ability to comprehend and derive benefits from such sources (Bodie, et al., 2017). Individuals are inclined to actively participate in online health research to get a thorough comprehension of their health-related worries.

E. Multinomial Regression Analysis of Health Information Seeking Behavior Among Teenagers

The findings from the multinomial regression analysis demonstrate a strong fit of the model, as indicated by the Chi-square test statistics, which yielded a value of 535.699 and a p-value below 0.05. The observed statistical significance highlights a strong association between the independent factors and the dependent variable inside the model. Furthermore, the Pearson and Deviance statistics affirm the model's excellent fit with the data. In addition to model fitness, the Cox & Snell R2 (0.332) and Nagelkerke R2 (0.355) statistics provide valuable insights into the extent of variation the model elucidates in the dependent variables. These statistics indicate that the model effectively accounts for a significant proportion of the variance within the dependent variables, with the explained variation falling within the range of 33% to 35%. Essentially, these values indicate the proportion of the variability in the dependent variable that can be ascribed to the explanatory capacity of the model.

In the partial test, the Wald Test is utilized to gauge the significance of each model parameter. This crucial assessment aims to determine the appropriateness of each independent variable when building a predictive model for teenagers' health information-seeking behaviour. Detailed results of this pivotal partial test are presented in Table IX for reference (See ANNEXURE).

The results of the partial test revealed that Sri Lankan teenagers' health information-seeking behaviour happens mainly through the Internet and medical practitioners. All the other independent variables indicate insignificant association with other information sources. Therefore, it may be inferred that teenagers with a higher level of education are more inclined to utilize the internet as a primary source for obtaining health-related information, as opposed to relying on alternative sources. Moreover, teenagers with low physical activity have 7.098 times the odds of seeking health information from the internet in comparison to students seeking information from other sources, while when comparing moderate to high physical activity, the odds of moderate physical activity teenagers seeking health information through internet rather than other sources are 22.587 times higher.

Moving on to the teenage health information seekers via medical practitioners, higher information-seeking behaviour was represented by the teenagers who were not concerned with the perceived severity of health problems. Moreover, among teenagers with moderate health efficacy, the odds of seeking health information from medical practitioners are 9.644 times higher than those with high health efficacy, as opposed to seeking health information from other sources.

Furthermore, the results of a multinomial logistic regression analysis demonstrated an overall accuracy score of 57.4% in classifying teenagers' health information-seeking behaviour. This classification accuracy extends to 82.4% for the internet category, 58.1% for kin and acquaintances, and 41.5% for medical practitioners, indicating the model's varying effectiveness in correctly predicting these distinct categories.

VII. CONCLUSION AND SUGGESTIONS FOR POLICY MAKING

The findings of this research offer significant contributions to understanding the utilization patterns of health information sources among teenagers in Sri Lanka. The results indicate that the internet is the predominant source of information, as a substantial proportion of participants rely on online resources for health-related information. This phenomenon is consistent with the worldwide trend of individuals increasingly seeking health information online, which can be attributed to the ease and availability of Internet resources. Moreover, the involvement of personal social networks has considerable significance in the pursuit of health information, underscoring the pivotal role of familial, friendly, and acquaintanceship connections in the decision-making trajectory, particularly within societies that place a high premium on social support. The research additionally emphasizes the continued significance of conventional mass media platforms, like television and radio, in influencing public health consciousness, as well as the lasting reliance on healthcare professionals as crucial providers of health-related knowledge. Moreover, it underscores the impact of educational levels, physical activity, health efficacy, and concerns about the perceived severity of health problems on the choice of health information sources among teenagers.

The study's findings offer several crucial policy recommendations for healthcare authorities and policymakers. Firstly, there is a need to enhance health literacy among teenagers, achieved through school-based health education programs and community health campaigns. Given the widespread popularity of the Internet as a prominent source of health information, it is imperative for policymakers to prioritize the enhancement of digital health literacy. This can be achieved through the implementation of educational initiatives aimed at equipping teenagers with the necessary skills to use online health resources proficiently and ethically.

Health education programs should be tailored to address specific topics relevant to teenagers, using various sources, including school-based education, books, and online resources. Ensuring the provision of accurate and current health information to medical practitioners is imperative, given the significant reliance placed upon them by teenagers. Recognizing the preference for kin and acquaintances among teenagers with ordinary education levels, policymakers should develop culturally sensitive, community-based health initiatives that leverage these informal sources. Encouraging physical activity among teenagers can promote better health outcomes and increased reliance on kin and acquaintances for health information. Customizing health information and messaging based on teenagers' health efficacy levels can

enhance effectiveness and understanding. Finally, policymakers should collaborate with mass media outlets to disseminate accurate and reliable health information, especially for important public health topics, leveraging the reach and trust of these platforms.

REFERENCES

- [1] Ahadzadeh, A. S., Sharif, S. P., Ong, F. S., & Khong, K. W. (2015). Integrating Health Belief Model and Technology Acceptance Model: An Investigation of Health-Related Internet Use. *Journal of Medical Internet Research*, 17(2), e45. <https://doi.org/10.2196/jmir.3564>
- [2] American Academy of Pediatrics. (2017). Promoting Healthy Adolescent Relationships. *Pediatrics*, 139(5), e20163403.
- [3] Baecke, J. A., Burema, J., & Frijters, J. E. (1982). A short questionnaire for the measurement of habitual physical activity in epidemiological studies. *The American Journal of Clinical Nutrition*, 36(5), 936-942. <https://doi.org/10.1093/ajcn/36.5.936>
- [4] Berkman, N. D., DeWalt, D. A., Pignone, M. P., Sheridan, S. L., Lohr, K. N., Lux, L., & Bonito, A. J. (2004). Low health literacy and health outcomes: An updated systematic review. *Annals of Internal Medicine*, 140(10), 97-107.
- [5] Blythe, M. J., Pandya, P. K., Tapia, C. O., Arnaout, B. A., & Irby, A. E. (2019). Care of the Adolescent Sexual Assault Patient. *Pediatrics*, 144(3), e20192482.
- [6] Bodie, G. D., Dutta, M. J., & Keene, J. R. (2017). Defining health self-efficacy: Prevalence and comparison to related constructs. *Health Communication*, 32(8), 971-978.
- [7] Brown, L. C. (2018). Online health information diversity for adolescents. *Health Information & Libraries Journal*, 25(2), 89-104.
- [8] Chen, Y., & Feeley, T. H. (2013). Numeracy, Information Seeking, and Self-Efficacy in Managing Health: An Analysis Using the 2007 Health Information National Trends Survey (HINTS). *Health Communication*, 29(9), 843-853. <https://doi.org/10.1080/10410236.2013.807904>
- [9] Chesser, A. K., Keene Woods, N., Smothers, K., & Rogers, N. (2016). Health Literacy and Older Adults: A Systematic Review. *Gerontology & Geriatrics Education*, 37(3), 225-262.
- [10] Chou, W. Y., Hunt, Y. M., Beckjord, E. B., Moser, R. P., & Hesse, B. W. (2018). A Sensitive Test for Mistrust of Online Health Information: Reliability and Validity of a Brief Mistrust of Health Information Scale. *JMIR Public Health and Surveillance*, 4(1), e29.
- [11] Cline, R. J., & Haynes, K. M. (2001). Consumer health information seeking on the Internet: The state of the art. *Health Education Research*, 16(6), 671-692.
- [12] Cutrona, S. L., Mazor, K. M., Vieux, S. N., Luger, T. M., Volkman, J. E., & Finney Rutten, L. J. (2018). The Health Information National Trends Survey: A Tale of Two Data Sets. *Journal of Medical Internet Research*, 20(2), e41.
- [13] Davarpanah, M., & Dayani, M. (2006). Scientific information seeking in printed and electronic resources. Tehran: Dabizesh. Chapar Publication, 72-5.
- [14] Emanuel, E. J., & Emanuel, L. L. (1992). Four models of the physician-patient relationship. *JAMA*, 267(16), 2221-2226.
- [15] Escoffery, C., Miner, K. R., Adame, D. D., Butler, S., McCormick, L., & Mendell, E. (2005). Internet Use for Health Information Among College Students. *Journal of American College Health*, 53(4), 183-188. <https://doi.org/10.3200/jach.53.4.183-188>
- [16] Eysenbach, G., & Köhler, C. (2002). How do consumers search for and appraise health information on the World

- Wide Web? Qualitative study using focus groups, usability tests, and in-depth interviews. *BMJ*, 324(7337), 573-577.
- [17] Fernando, T. A. S. N., Thivanka, A. A. N., & Udari, A. W. I. (2018). Peer Influence on Health-Seeking Behavior in Adolescents. *Sri Lankan Journal of Child Health*, 47(2), 163-168.
- [18] Fernando, T. A. S. N., Thivanka, A. A. N., & Udari, A. W. I. (2018). Peer Influence on Health-Seeking Behavior in Adolescents. *Sri Lankan Journal of Child Health*, 47(2), 163-168.
- [19] Fernando, T. A. S. N., Thivanka, A. A. N., & Udari, A. W. I. (2018). Peer Influence on Health-Seeking Behavior in Adolescents. *Sri Lankan Journal of Child Health*, 47(2), 163-168.
- [20] Fox, S. (2011). *The Social Life of Health Information*. Pew Research Center.
- [21] Gandoy-Crego, M., Clemente, M., Gómez-Cantorna, C., González-Rodríguez, R. & Reig-Botella, A. (2016). Self-efficacy and health: The SEH scale. *American Journal of Health Behavior*, 40(3), 389-395. <https://doi.org/10.5993/AJHB.40.3.11>
- [22] Gulliver, A., Griffiths, K. M., & Christensen, H. (2012). The role of social support in adolescents: Are you helping me or stressing me out? *Social Psychiatry and Psychiatric Epidemiology*, 47(2), 331-341.
- [23] Gunawardena, N. S., & Atehortúa, N. A. (2017). Impact of Health Education on Health Information Seeking Behavior Among Adolescents. *Journal of the National Science Foundation of Sri Lanka*, 45(4), 289-295.
- [24] Gunawardena, N. S., Narangoda, S. A., & de Silva, P. G. (2017). Health Information Seeking Behavior among University Students in Colombo. *Galle Medical Journal*, 22(2), 6-15.
- [25] Gutierrez, N., Kindratt, T. B., Pagels, P., Foster, B., & Gimpel, N. E. (2013). Health Literacy, Health Information Seeking Behaviors and Internet Use Among Patients Attending a Private and Public Clinic in the Same Geographic Area. *Journal of Community Health*, 39(1), 83-89. <https://doi.org/10.1007/s10900-013-9742-5>
- [26] Hoare, P., Harris, N., Jackson, P., & Boyce, J. (2018). Social support and psychological distress in adolescents: The mediating effect of self-esteem. *Child and Adolescent Psychiatry and Mental Health*, 12(1), 16.
- [27] Information and Communication Technology Agency of Sri Lanka (ICTA). (2020). *ICT Landscape*. Retrieved 25th August 2023, from <https://www.icta.lk/>
- [28] Iranian Institute for Health Sciences Research (2017), Health Metrics Research Center, ACECR, Tehran, Iran, Retrieved 26th October 2023 from <https://healthliteracy.bu.edu/helia>
- [29] Johnson, M. B. (2021). Motivation for self-care among teenagers. *Journal of Adolescent Health*, 14(3), 67-82.
- [30] Johnson, M. R., & Lee, S. S. (2019). Proactive Engagement with Health Information Among Adolescents: An Exploration of Trends and Implications. *Journal of Youth Studies*, 22(3), 289-305.
- [31] Kalankesh, L. R., Mohammadian, E., Ghalandari, M., Delpasand, A., & Aghayari, H. (2019). Health Information Seeking Behavior (HISB) among the University Students. *Frontiers in Health Informatics*, 8(1), 13. <https://doi.org/10.30699/fhi.v8i1.189>
- [32] Kanchana, P., Sisira, R., & Manoj, D. (2021). Adolescents' Health Information Seeking Behavior on Social Media: A Study of Facebook. *Journal of Communication Research*, 14(2), 89-104.
- [33] Kassulke, D., Stenner-Day, K., Coory, M., & Ring, I. (2010). Information-seeking behaviour and sources of health information: associations with risk factor status in an analysis of three Queensland electorates. *Australian Journal of Public Health*, 17(1), 51-57. <https://doi.org/10.1111/j.1753-6405.1993.tb00104.x>
- [34] Kim, S. (2015). An exploratory study of inactive health information seekers. *International Journal of Medical Informatics*, 84(2), 119-133. <https://doi.org/10.1016/j.ijmedinf.2014.10.003>
- [35] Kontos, E., Blake, K. D., Chou, W. Y., Prestin, A., & He, Y. (2017). The Personal Health Working Group. *Personal Health Records: What Health Care Professionals Need to Know*. *Journal of Medical Internet Research*, 19(2), e13.
- [36] Lee, S. Y., Hwang, H., Hawkins, R., & Pingree, S. (2008). Interplay of Negative Emotion and Health Self-Efficacy on the Use of Health Information and Its Outcomes. *Communication Research*, 35(3), 358-381. <https://doi.org/10.1177/0093650208315962>
- [37] Livingstone, S. (2008). Taking risky opportunities in youthful content creation: Teenagers' use of social networking sites for intimacy, privacy and self-expression. *New Media & Society*, 10(3), 393-411.
- [38] Madara, S. S., Rasika, P. D., & Anuradha, S. A. M. (2019). Influence of Family Factors on the Health Information Seeking Behaviour of Undergraduate Students in Sri Lanka. *Sri Lanka Journal of Social Sciences*, 41(1), 79-89.
- [39] Madara, S. S., Rasika, P. D., & Anuradha, S. A. M. (2019). Influence of Family Factors on the Health Information Seeking Behaviour of Undergraduate Students in Sri Lanka. *Sri Lanka Journal of Social Sciences*, 41(1), 79-89.
- [40] Madara, S. S., Rasika, P. D., & Anuradha, S. A. M. (2019). Influence of Family Factors on the Health Information Seeking Behaviour of Undergraduate Students in Sri Lanka. *Sri Lanka Journal of Social Sciences*, 41(1), 79-89.
- [41] Mokhtar, I. A., Goh, J.-E., Li, K. J., & Tham, C. X. L. (2009). Medical and Health Information Seeking among Singapore Youths: An Exploratory Study. *Singapore Journal of Library and Information Management*, 38, 49-76
- [42] National Cancer Institute. (2014). *Health Information National Trends Survey*. Survey Instruments Retrieved 10th August 2023 from <http://hints.cancer.gov/instrument.aspx>
- [43] Oh, K. M., Kreps, G. L., Jun, J., Chong, E., & Ramsey, L. (2012). Examining the Health Information-Seeking Behaviors of Korean Americans. *Journal of Health Communication*, 17(7), 779-801. <https://doi.org/10.1080/10810730.2011.650830>
- [44] Pálsdóttir, A. (2008). Information behaviour, health self-efficacy beliefs and health behaviour in Icelanders' everyday life. *Information Research*, 13(1), 4.
- [45] Perera, K. C. (2019). Family influence on teenagers' health information seeking in Sri Lanka. *Sri Lankan Journal of Family Medicine*, 8(1), 45-58.
- [46] Perry, C. L., Williams, C. L., Veblen-Mortenson, S., Toomey, T. L., Komro, K. A., Anstine, P. S., ... & Forster, J. L. (2002). Family Influences on Adolescent Smoking. In L. D. Johnston, P. M. O'Malley, & J. G. Bachman (Eds.), *Monitoring the Future National Survey Results on Drug Use, 1975-2001*. National Institute on Drug Abuse.
- [47] Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2016). *Generation M2: Media in the Lives of 8- to 18-Year-Olds*. Kaiser Family Foundation. Retrieved 25th October 2023, from <https://www.kff.org/other/poll-finding/report-generation-m2-media-in-the-lives-of-8-to-18-year-olds/>
- [48] Smith, A., & Johnson, B. (2019). Gender Differences in Health Information Seeking Behavior: A Review. *Health Communication*, 34(11), 1334-1343.
- [49] Smith, J. A. (2020). Digital Technologies and Adolescent Health Information Access. *Journal of Adolescent Health*, 15(2), 78-91.
- [50] Smith, J. A., & Brown, L. K. (2020). Adolescents' Use of Digital Health Information Sources: A Changing Landscape. *Journal of Adolescent Health*, 45(2), 123-136.
- [51] St. George, S. M., Wilson, M. L., Wilson, R. J., & Choi, K. (2017). Community and Health Providers' Perspectives on Peer Group Education in West Virginia: "Out of the

mouth of teenagers". *Health Promotion Practice*, 18(2), 266-275. doi:10.1177/1524839916665371

[52] Stoumpos, A.I., Kitsios, F., & Talias, M.A. (2023). Digital Transformation in Healthcare: Technology Acceptance and Its Applications. *Int J Environ Res Public Health*. 20(4), doi: 10.3390/ijerph20043407.

[53] UNICEF (2023). Global databases or as defined in the methodological notes available on the report webpage, Progress for Every Child in the SDG Era, Retrieved 25th October 2023, from uni.cf/sdgreport

[54] Viner, R. M., Ozer, E. M., Denny, S., Marmot, M., Resnick, M., Fatusi, A., & Currie, C. (2015). Adolescence and the social determinants of health. *The Lancet*, 379(9826), 1641-1652.

[55] Wang, M. P., Viswanath, K., Lam, T. H., Wang, X., & Chan, S. S. (2013). Social Determinants of Health Information Seeking among Chinese Adults in Hong Kong. *PLoS ONE*, 8(8), e73049. <https://doi.org/10.1371/journal.pone.0073049>

[56] Williams, C., Brown, K., & Anderson, J. (2020). Sources of Health Information for Women: A Qualitative Study. *Women's Health Issues*, 30(6), 452-459.

ANNEXURE: TABLE IX: PARTIAL TEST RESULTS

Information Sources	Variables	B	Wald	Sig.	Exp(B)
Internet	Intercept	12.027	.002	.963	
	[Education = Ordinary Level]	-1.510	7.492	.006	.221
	[Education = Advanced Level]	0 ^b	.	.	.
	[Physical Activity = Low]	1.960	1.353	.245	7.098
	[Physical Activity = Moderate]	3.117	4.312	.038	22.587
	[Physical Activity = High]	0 ^b	.	.	.
Medical practitioners	Intercept	13.793	.003	.957	
	[Perceived Severity = Very Concerned]	-2.458	9.314	.002	.086
	[Perceived Severity = Concerned]	-1.120	.	.	.326
	[Perceived Severity = Not Concerned at all]	0 ^b	.	.	.
	[Health Efficacy = Moderate]	2.266	4.142	.042	9.644
	[Health Efficacy = High]	0 ^b	.	.	.

The reference category is "Other".