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Article

The Contribution of Social Media to Public Health Education and Awareness

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ABSTRACT

Background: Social media has become a major source of information influencing public awareness, education, and health-related decision-making. Understanding user engagement patterns and perceptions of content credibility is essential for improving the effectiveness of digital health communication. **Objectives:** This study aimed to assess social media usage patterns, engagement behaviors, content preferences, and perceived credibility among a heterogeneous population, and to examine associations between demographic factors and engagement motivations. **Methodology:** A cross-sectional quantitative study was conducted using a structured questionnaire. Data were collected from a diverse sample of participants to evaluate demographic characteristics, frequency of social media use, interaction behaviors, preferred content formats, motivations for engagement, and perceived credibility of online content. Statistical analyses were performed to determine associations between demographic variables, engagement behaviors, and motivational factors. **Results:** The results indicated that young adults aged 26–35 years, predominantly urban residents, demonstrated the highest levels of social media usage. Video and livestream content formats were most frequently preferred, with engagement primarily driven by appealing presentation and personal relevance. Perceptions of credibility varied across participants; however, the majority rated social media content as highly credible. Statistically significant associations were observed between demographic characteristics, engagement behaviors, and motivations for interaction. The study's strengths included a diverse and substantial sample size, while limitations involved reliance on self-reported data and lack of platform-specific analysis. **Conclusion:** Social media engagement and credibility perceptions are strongly influenced by content design, digital literacy, and accessibility. Public health initiatives should prioritize the development of credible, engaging digital content and promote critical evaluation skills to enhance effective communication and reduce the risk of misinformation.

Keywords: Social media, Public Health, Education, Awareness, Healthcare, Primary Health

INTRODUCTION

Social media has transformed ways of communication, information sharing, and content consumption for people over the years. This has grown to involve people in all walks of life. It is now the center where information is shared, entertainment is acquired, and social interaction occurs through platforms such as Facebook, Instagram, YouTube, and TikTok, among others, with billions of users creating diverse content around the world. Various behavioral, psychological, and sociocultural consequences have been associated with social media interaction and the degree of such interaction (1,2). Hence, the pattern of use that is required to estimate the influence of social media on individual and community behaviors needs to consider exposure frequency, motivation to interact, and perceptions of the credibility of the content. Engagement motivations-most recently those with a focus on sources (source credibility) or on content (personal relevance)-moderate how information is internally digested and then broadcast publicly 1. Less noticed in the literature is that there are strong interactions in place between demographic variables, preferences for certain types of content, and perceptions about its credibility, which further shape decision-making and resulting behavioral consequences (3,4).

While social media have been integrated into life, there is a gap that still exists in understanding varied population groups engaging with or responding to the content that is shared. Interaction frequency, often predetermined by such factors as age, educational level, or occupation, has been attributed to varying levels of consumption or engagement with content (5,6).In fact, educational level may make differences in the preference for informational content, while a young audience usually likes visual media, such as video or live streams, very much. Besides, the motivational reasons for consuming the content-such as social responsibility or personal

relevance-may also vary among different cultural, social, or individual factors and make analysis of behavioral patterns even more complicated (7,8).The nature of the content and the platforms used will also shape perceived credibility-a critical factor in how people spread accurate information or misinformation. Understanding these nuanced interactions is crucial to developing targeted strategies to enhance the positive use of social media and mitigate potential harms (9,10).

The following research will try to understand how this gap can be filled, assessing the relationship between demographic factors, frequencies of social media interaction, motivations for engaging in it, and the perceived credibility of the shared content. Based on the in-depth survey and serious statistical analysis, the research develops a certain understanding of how different demographic backgrounds interact with social media, the nature of the content they would like to see, and their trust in the information consumed (11,12).These findings add to the growing literature on behavioral impacts from social media, while providing evidence-based recommendations that would heighten credibility of content and improve engagement strategies. Indeed, such insights are very relevant for today's times, where social media has influenced public opinion, decisions regarding healthcare, and acceptance norms to a large extent. This study focuses on different demographic groups and gives a comprehensive analysis of the usage pattern, hence providing an overall understanding of the complex dynamics of social media usage (13,14).

MATERIAL AND METHODS

The purpose of this cross-sectional study is to describe the pattern of using social media, engagement behaviors, and perceptions about content among a heterogeneous population. Convenience sampling was used to recruit participants, aged between 18-85 years, from varied demographic backgrounds regarding gender, education, occupation, and residential settings.

The selection criteria included active social media users aged 18 years and above. Those who refused consent and were not regular users of the social media platforms were excluded from the study. Demographic information, interaction frequency, motivations for engagement, content types preferred, and the perceived credibility of shared content were assessed using a structured questionnaire. A small portion of the population was used for pre-testing the research instrument to ensure clarity and reliability. This was addressed by gaining ethical clearance from the review board of the institution, and further considerations were made in accord with the Declaration of Helsinki on participant rights and confidentiality. Written informed consent was collected from all participants prior to data collection, where an emphasis on voluntary participation was underlined, and the right to withdraw at any stage with no consequences. The administration of the survey considered online and paper-based options in order to increase accessibility.

These are key variables: exposure frequency, motivation for engaging, the nature of the content shared, and credibility rating, for which there is a categorical option to standardize the responses. The analysis of data has been done using SPSS, Version 25. To reduce the categorical data, frequencies and percentage were calculated and chi-square tests done when testing the relationship that may exist between demographic data and behavioral characteristic. An alpha probability of $p \leq 0.05$ level is adapted as the criterion to point at the absence or existence of a statistically significant change in this paper. Handling missing value methodology: Missing values treatment approach used in the present study is a listwise method so no wrong value may contribute some bias in the results produced.

The study was conducted within a defined timeframe to avoid biases related to seasonal trends or temporal variations in the use of social media. Such a methodology has ensured comprehensive and ethical data collection and analysis to derive meaningful insights into social media engagement behaviors.

RESULTS

Table 1 illustrates demographic variables, categories, frequencies, percentages, and p-values. The largest age group represented is the category of 26-35 years (39.61%), followed by 18-25 years (31.58%), whereas the least represented age group category is 56 and above (4.43%). Both male and female participants were almost equally distributed, with a small portion preferring not to disclose their gender (6.09%).

Most of the participants finished secondary school, 30.47%, while a small group did not have even formal education, taking 10.8%. Currently, over half of these participants were employed, 51.8%, while retirees were the least, composing 3.32% of the population. Later, 73.96% were from urban residency, and most of these participants used social media more frequently, 51.52%. The most central platform was Facebook, by 30.75%; while TikTok and Twitter were among the least used. The participants reported more frequent behavioral change, with 61.77% of the respondents showing positive change. Significant associations were obtained in age, occupation, and platform usage ($p < 0.05$), which indicate meaningful differences across groups.

Table 1: Distribution of Demographic Variables with Frequencies, Percentages, and p-values

Variable	Category	Frequency	Percentage (%)	p-value
Age	26-35	143	39.61	0.03
	18-25	114	31.58	0.03
	36-45	50	13.85	0.03
	46-55	38	10.53	0.03
	56 and above	16	4.43	0.03

Gender	Male	170	47.09	0.12
	Female	169	46.81	0.12
	Prefer not to say	22	6.09	0.12
Education Level	Secondary school	110	30.47	0.08
	Undergraduate degree	103	28.53	0.08
	Postgraduate degree	58	16.07	0.08
	Primary school	51	14.13	0.08
	No formal education	39	10.80	0.08
Occupation	Employed	187	51.80	0.01
	Student	115	31.86	0.01
	Unemployed	47	13.02	0.01
	Retired	12	3.32	0.01
Residence	Urban	267	73.96	0.20
	Rural	94	26.04	0.20
Social Media Usage	Frequently	186	51.52	0.15
	Constantly	71	19.67	0.15
	Occasionally	62	17.17	0.15
	Rarely	42	11.63	0.15
Platform	Facebook	111	30.75	0.05
	Instagram	94	26.04	0.05
	YouTube	51	14.13	0.05
	TikTok	49	13.57	0.05
	Twitter	39	10.80	0.05
	Others	17	4.71	0.05
Behavioral Change	Yes (1)	223	61.77	0.00
	No (0)	138	38.23	0.00

Table 2 presents data on the frequency of exposure, type of content, and credibility ratings with their respective frequencies, percentages, and p-values. Most participants reported frequent exposure to content (41.55%), with a notable percentage indicating occasional exposure (27.70%). The most consumed type of content was videos or live streams (33.24%), while personal stories were the least consumed (16.90%). In terms of credibility, the largest group rated content as mostly credible (38.78%), followed by somewhat credible (33.52%), with the smallest group rating it as completely credible (13.85%). Statistically significant associations ($p < 0.05$) were observed for all variables, highlighting differences in participants' engagement based on exposure frequency, content type, and perceived credibility.

Table 2: Frequency of Exposure, Type of Content, and Credibility Ratings

Variable	Category	Frequency	Percentage (%)	p-value
Frequency of Exposure	Frequently	150	41.55	<0.001
	Occasionally	100	27.70	<0.05
	Rarely	50	13.85	<0.01
	Almost always	61	16.90	<0.001
Type of Content	Campaigns by organizations	80	22.16	<0.05
	Videos or live streams	120	33.24	<0.001
	Informational posts	100	27.70	<0.01
	Personal stories	61	16.90	<0.001
Credibility Rating	Completely credible	50	13.85	<0.01
	Mostly credible	140	38.78	<0.001
	Somewhat credible	121	33.52	<0.05
	Not credible	50	13.85	<0.05

Table 3: Distribution of Interaction Frequency, Engagement Motivation, and Shared Content

Variable	Category	Frequency	Percentage (%)	p-value
Interaction Frequency	Frequently	242	66.86	0.03*
	Occasionally	73	20.18	
	Rarely	37	10.22	
	Always	10	2.76	
Engagement Motivation	Engaging presentation	120	33.15	0.05*
	Personal relevance	100	27.62	
	Credibility of the source	90	24.86	
	Social responsibility	53	14.63	

Shared Content	Yes	161	44.48	0.01**
	No	201	55.52	

Table 3 summarizes interaction frequency, engagement motivation, and shared content with their frequencies, percentages, and p-values. The frequency of interaction was mostly frequent, 66.86%, followed by occasionally interacting, 20.18%, while only 2.76% of the interactions were always. In regard to engagement motivation, an engaging presentation was the most mentioned at 33.15%, followed by personal relevance at 27.62%, credibility of the source at 24.86%, while social responsibility motivated the least number of participants at 14.63%. In relation to content shared, most of the participants reported 'not shared' with 55.52%, and 44.48% responded as sharing. This reflects two significant associations regarding interaction frequency and shared content.

DISCUSSION

The results showed significant patterns and associations in participant demographics, engagement behaviors, and content-related perceptions, providing insight into the drivers of social media interaction. The dominant age group was 26-35 years, which agreed with previous studies indicating that young adults make up a considerable proportion of social media users due to their higher adaptability to digital technologies and greater reliance on these platforms for information and communication (15).

The gender distribution was almost equal, showing that social media has become a ubiquitous tool with no barriers to gender, though some differences in the preference for platforms could not be examined due to the aggregate nature of data collection. The educational level and occupation were strongly related to social media usage behavior. Secondary school education was the most predominant among participants, as at this level, digital access and information-seeking practices more or less balance out with each other. Employed status was the predominant occupations represented in the sample. Also, the employed population happened to be the greatest consumer of social media usage in this study. This is so because the professional and information needs of this group are great nowadays, especially in these countries which are turning a page towards digital communication and online communication (16).

These findings are in line with previous studies that indicated urban residents dominate social media usage due to better access to the internet and technological infrastructure. On the other hand, rural participation underlined the gradual penetration of digital tools in traditionally underserved areas, though barriers like cost and literacy still persist. The frequency of exposure to social media content ranged from "frequent" being the most common. This supports previous findings that habitual use of social media is usually facilitated by ease of access and speed of information dissemination. Type of content significantly influenced consumption, with the highest for videos or live streams (17).

This could be due to the nature of immersion and visual engagement with which video content presents itself and has, correspondingly, been found to increase the level of attention and retention among users. Credibility ratings suggested that the participants favored "mostly credible" content, though a fair share of the proportion rated the content as "somewhat credible." This mixed perception about credibility is reflective of growing concerns related to misinformation and the credibility of online sources. The frequency of the interaction and motivation for engagement further deepen the understanding of participants' behaviors. More frequent interactions are present, which corresponds to the knowledge that social media platforms may be addictive through their interactiveness and algorithmic reinforcements of user preferences 9. Among the motivations to engage, such as an engaging presentation of information, personal relevance showed the important role of content design in making it catchy for user attention (18).

Social responsibility, although less prevalent, was still a significant drive, thus implying users may have an understanding of or are concerned with others about the situation at large (10). Most of those who were noted not to share any content similarly concurs with the arguments pertaining to privacy and the fear of judgments as being major inhibitors that deter online sharing. The major strengths included its relatively large and very diverse sample size, among others, while the statistical tests were also robust, attempting to see if significant associations would appear. On the negative side, this is a self-reported data-based study whereby several biases associated with self-reported measures cannot be eliminated: for instance, social desirability and recall errors. Moreover, the question concerning specific platform behaviors does not explain the variation in important nuances like intensity and frequency and therefore conceals many important differences in the uses of various social media applications (19).

Another limitation was the cross-sectional nature of the study, limiting establishing causal links between variables. Future studies should overcome these limitations by adopting longitudinal designs and qualitative approaches where possible to provide an in-depth understanding of engagement behaviors. Algorithms and personalized content delivery are also likely to be very fertile areas for exploratory studies to understand how these factors influence user perceptions and behavior (20,21).

Additionally, the ability of users to critically assess information and their level of digital literacy should be improved through focused interventions to increase the chances of credible information and reduce the effects of misinformation. Finally, policies that ensure internet connectivity in rural areas will solve the problem of the digital gap and make access to these social media platforms more representative.

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