Social Media as a Platform for Cancer Care Decision Making: A Survey-Based Study on Trust, Engagement, and Preferences

Anna Rose Johnson, Grace Anne Longfellow, Clara Lee, Benjamin Ormseth, Gary Skolnick, Mary Politi, Yonaira Rivera, Terence Myckatyn

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Anna Rose Johnson[1] MD, MPH; Grace Anne Longfellow[2] BS; Clara Lee[2] MD, MPP; Benjamin Ormseth[3] MD; Gary Skolnick[1] BS; Mary Politi[4] PhD; Yonaira Rivera[5] MPH, PhD; Terence Myckatyn[1] MD, FRCS, FACS

[1]Division of Plastic and Reconstructive Surgery Department of Surgery Washington University School of Medicine, Saint Louis Saint Louis US
[2]Department of Surgery, Lineberger Comprehensive Cancer Center University of North Carolina at Chapel Hill Chapel Hill US
[3]Department of Plastic Surgery University of Texas Southwestern Medical Center Dallas US
[4]Division of Public Health Sciences Department of Surgery Washington University School of Medicine, Saint Louis Saint Louis US
[5]Department of Communication School of Communication & Information Rutgers University New Brunswick US

Corresponding Author:
Terence Myckatyn MD, FRCS, FACS
Division of Plastic and Reconstructive Surgery
Department of Surgery
Washington University School of Medicine, Saint Louis
1020 N. Mason Rd, Ste 110
Saint Louis
US

Abstract

Background: Decision aids can improve patient and clinician decision making but are underused and restricted to clinical settings.

Objective: To investigate the potential dissemination of health decision aids through digital platforms and social media.

Methods: A cross-sectional survey was conducted in February 2023 using an online platform. Descriptive statistics evaluated demographics, health and cancer information-seeking behaviors, and social media trust and usage. Correlation and non-parametric tests analyzed relationships between these variables and likelihood to view health information or access decision aids online.

Results: Of 607 respondents, 65.4% had searched for cancer information. Of these 46.6% had used the internet for their primary source of cancer information. Facebook was the most popular social media platform, used by 84.2% of respondents. Trust in social media for health information was higher among those of Black or Asian race (p=0.003), younger age (p<0.001), and fewer years as a United States resident (p=0.004). Trust in social media for health information was associated with a higher likelihood of viewing online health information and accessing a decision aid online (p<0.001). Younger age was associated with increased online health seeking behavior (p=0.008). Social media engagement was associated with increased online health seeking behavior (?=0.20 p<0.001) and willingness to access an online decision aid (?=0.21, p<0.001).

Conclusions: Social media platforms hold promise for increasing accessibility of evidence-based health information and decision aids. Future research should evaluate the use of social media with patient populations. The nuanced relationship(s) between trust and digital media use should be explored to optimize content delivery. Clinical Trial: None

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Anna Rose **Johnson**, MD, MPH[1*]; Grace Anne **Longfellow**, BS[2*]; Clara N. **Lee**, MD, MPP[2]; Benjamin H. **Ormseth**, MD[3]; Gary B. **Skolnick**, BS[1]; Mary C. **Politi**, PhD[4]; Yonaira M. **Rivera**, PhD, MPH[5]; Terence M. **Myckatyn**, MD[1]

1. Division of Plastic and Reconstructive Surgery, Department of Surgery, Washington University in St. Louis School of Medicine, St. Louis, MO, USA.
2. Department of Surgery, Lineberger Comprehensive Cancer Center, University of North Carolina at Chapel Hill, NC, USA.
3. Department of Plastic Surgery, University of Texas - Southwestern, Dallas, TX, USA.
4. Division of Public Health Sciences, Department of Surgery, Washington University School of Medicine, St. Louis, MO, USA.
5. Department of Communication, School of Communication & Information, Rutgers University, New Brunswick, NJ, USA.

*Indicates shared first authorship

Corresponding Author:

Terence M. Myckatyn, MD, FACS, FRCSC

Professor, Division of Plastic and Reconstructive Surgery

1020 N. Mason Road, Suite 110 Saint Louis, MO 63141

Email: myckatyn@wustl.edu

Phone: 314-996-3040

Fax: 314-996-3030

ABSTRACT

Introduction: Decision aids can improve patient and clinician decision making but are underused and restricted to clinical settings. This study investigated the potential dissemination of health decision aids through digital platforms and social media.

Methods: A cross-sectional survey was conducted in February 2023 using an online platform. Descriptive statistics evaluated demographics, health and cancer information-seeking behaviors, and social media trust and usage. Correlation and non-parametric tests analyzed relationships between these variables and likelihood to view health information or access decision aids online.

Results: Of 607 respondents, 65.4% had searched for cancer information. Of these 46.6% had used the internet for their primary source of cancer information. Facebook was the most popular social media platform, used by 84.2% of respondents. Trust in social media for health information was higher among those of Black or Asian race ($p=0.003$), younger age ($p<0.001$), and fewer years as a United States resident ($p=0.004$). Trust in social media for health information was associated with a higher likelihood of viewing online health information and accessing a decision aid online ($p<0.001$). Younger age was associated with increased online health seeking behavior ($p=0.008$). Social media engagement was associated with increased online health seeking behavior ($\rho=0.20$ $p<0.001$) and willingness to access an online decision aid ($\rho=0.21$, $p<0.001$).

Conclusions: Social media platforms hold promise for increasing accessibility of evidence-based health information and decision aids. Future research should evaluate the use of social media with patient populations. The nuanced relationship(s) between trust and digital media use should be explored to optimize content delivery.

Keywords: *social media; decision aids; shared decision making*

INTRODUCTION

Shared decision-making (SDM) describes a process between the clinician and patient to facilitate preference-sensitive choices.[1] Decision aids, which support the SDM process, are

evidence-based tools that give patients information, clarify their preferences, and prepare them to make a choice.[2,3] Within the past decade, multiple randomized controlled trials have demonstrated that decision aids improve patient knowledge and the quality of decisions.[2–10] Unfortunately, decision aid use has been limited, and dissemination of decision aids has been largely confined to clinical settings. The focus on clinical settings as the singular forum for decision aid deployment is predicated on clinician buy-in, and may restrict the use of decision aids to a select cohort of the population.[11–18]

Social media offers a promising means for disseminating decision aids without relying on health care access. It may also provide a more extended and personalized modality for disseminating information.[19] With 81% of Americans using social media—a number that continues to grow—social media platforms present an underused opportunity to disseminate highly accessible decision-making tools.[20] Social media can help to overcome challenges associated with traditional clinical encounters (i.e., time, workflow, etc.). Social media has been shown to enhance the patient-clinician relationship by promoting empowerment, reducing communication barriers, and increasing knowledge about conditions and treatment options.[13,21]

Despite the potential benefits of social media for decision aid dissemination, it remains uncertain whether individuals will actively use decision aids available through social media or other online channels. We aimed to evaluate female public interest in using an online decision aid to assist in cancer-related treatment decisions. We examined factors associated with engagement in decision aids on social media and evaluated unique health-seeking behaviors for different social media platforms.

METHODS

Survey Design

A cross-sectional survey was employed to assess use and preferences for social media

advertised decision-making tools for cancer care. The Institutional Review Board (IRB) approved the study as exempt. The survey involved several key areas of inquiry, fully detailed in the supplementary materials (see **Appendix A**). Briefly, these areas included "Sources of Health Information," exploring individuals' preferences and trust levels in various health information sources; "Social Media Use," examining patterns and motivations behind social media interactions, particularly concerning health information; and "Demographic Data," covering a wide range of personal and socioeconomic factors. Within the "Social Media Use" section, two items related to the main outcomes of the study were embedded, created by the study team, which asked participants to imagine themselves or a loved one deciding about cancer treatment and then assessing their likelihood of viewing cancer treatment information or clicking on a decision aid posted on social media. Other survey questions were adapted from items from the Health Information National Trends Survey (HINTS).[22] Items assessing reasons to use social media included categories identified in the literature through Uses and Gratifications Theory and the Social Media Engagement Model.[23–25] The response formats varied according to the specific inquiry, including multiple-choice options, checkboxes for applicable answers, and Likert scales for assessing attitudes and opinions. The questionnaire was designed to be completed within five to ten minutes and included two attention-check questions.

Population Targeting and Survey Distribution

The survey was designed and hosted on the Qualtrics platform (Qualtrics, Provo, UT) and distributed via Prime Panels, a component of CloudResearch.[26] Prime Panels employs a novel data collection method by aggregation of diverse opt-in market research panels into a comprehensive sampling platform, facilitating the recruitment of participants from existing commercial panel pools. This method supports demographic quotas and specific eligibility criteria, enhancing data representativeness, especially among hard-to-reach populations. [27]

We aimed to recruit 600 female participants, with an additional 20% enrolled to compensate

for potential exclusions due to poor response quality, setting the total target at 750 participants. Study specific eligibility criteria incorporated into the PrimePanels query included female participants aged 35 or older with U.S. internet protocol (IP) addresses. The study exclusively enrolled female participants to direct focus towards future research efforts related to cancer in women. Demographic quotas based on United States Census Bureau parameters were set as: 16% Hispanic, Latino, or Spanish origin; 78% White; 13% Black; 5% Asian; 2% American Indian or Alaskan Native; and 2% other races. Age quotas aimed for an equal distribution between the 35-55 and 56-75 age ranges to reflect the demographics of breast cancer survivors. To ensure survey security, Qualtrics options for “Bot Detection,” “RelevantID,” and “Prevent Indexing” were enabled. The survey, conducted in February 2023, offered varying compensation based on the recruitment platform used.

Statistical Analyses

Data analysis was performed using Microsoft Excel® (Microsoft Corporation, Redmond, WA, USA) and SPSS Statistics (IBM Corp., Armonk, NY, USA, Version 28.0). Graphs were constructed via R Statistical Software (v4.1.2; R Core Team 2021). Descriptive statistics characterized the demographic characteristics, health-seeking behaviors, and social media engagement of the study population. Social media engagement was determined based on respondents' selections of platforms they actively used, followed by survey questions that assessed the frequency of engagement with each platform. These questions categorized usage frequency into four levels: multiple times a day, once a day, at least three times a week, or less than three times a week. Numerical values ranging from 1 to 4 were assigned to these categories, with 1 indicating the least frequent usage and 4 the most frequent. An 'Overall Social Media Engagement Score' was computed by aggregating these values across all platforms used by a respondent. Participants were classified into four groups based on their 'Overall Social Media Engagement Score' to approximate quartiles for analysis. These groups were defined as follows: "Low Engagement" (scores > 0 and ≤ 3), "Moderate Engagement" (scores > 3 and ≤ 4), "Moderate-High Engagement" (scores > 4 and ≤

8), and "High Engagement" (scores > 8 and ≤ 23).

To ensure data integrity, surveys were excluded based on the following criteria: completion times shorter than three minutes or longer than twenty minutes, flags from Qualtrics indicating duplicate responses, an Amazon Mechanical Turk (mTurk, Amazon, Seattle, WA) fraud score above 50, or incorrect responses to two embedded control multiple-choice questions.

Analysis of Trustworthiness of Social Media

To assess the associations between demographic factors and the perceived trustworthiness of social media as a reliable source of health information, chi-square and Fisher's exact tests were performed. Additionally, non-parametric tests, specifically the Kruskal-Wallis and Mann-Whitney U tests, were employed to evaluate the correlations between demographic characteristics, trust in social media, and the propensity to use decision aids or view cancer-related health information on these platforms. To ensure that there were enough observations in each category for the statistical analysis to be reliable, the response categories "Trustworthy" and "Very Trustworthy" were merged into a single "Trustworthy" category, while "Untrustworthy" and "Very Untrustworthy" were combined into "Untrustworthy."

Analysis of Social Media Engagement

In terms of the two questions assessing the likelihood of engaging with cancer treatment-related information see on social media, responses were condensed from a seven-tier scale to three categories: "Unlikely" (1-3), "Neutral" (4), and "Likely" (5-7) to ensure a more balanced distribution of responses, as some of the original categories had very few observations. Spearman’s rank correlation coefficients were calculated to quantify the strength and direction of the association between the 'Overall Social Media Engagement Score' and the tiered scores representing the likelihood of interacting with cancer-related information. For visual interpretation, the mean likelihood of respondents interacting with cancer-related information was calculated for each unique 'Overall Social Media Engagement Score.' Additionally, a trend line was generated, with the slope,

intercept, and coefficient of determination (R^2) displayed, providing a quantitative measure of the relationship between social media engagement and interaction with cancer-related content. For all analysis, statistical significance was set at a p-value of less than 0.05, using two-tailed testing.

RESULTS:

A total of 757 responses were initially recorded at the completion of distribution. Of these 607 met inclusion criteria with a Qualtrics “Response Quality” of 99.0%. Participants completed the survey in a median ± standard deviation time of 5.5 ± 2.6 minutes.

Respondent Demographics: All participants were female, aged 35 to 75 years (**Table 1**). Most were non-Hispanic (91.6%) and White (79.1%). The most common education level was some college or an associate degree (33.1%). The most common income range was $20,000 to $35,000 (18.9%), with over half (53.9%) earning less than $50,000 annually.

Table 1. Demographic Characteristics of Respondents

		N (%)
Total Respondents		607 (100)
Ethnicity	Hispanic	48 (7.9)
	Non-Hispanic	556 (91.6)
	Unknown/Prefer not to answer	3 (0.5)
Race	White	480 (79.1)
	Black	72 (11.9)
	Asian	27 (4.4)
	Native American or Alaskan Native	16 (2.6)
	Native Hawaiian or Pacific Islander	0 (0.0)
	Other/Prefer not to Answer	11 (1.8)
Age	35-39	82 (13.5)
	40-49	141 (23.2)
	50-59	149 (24.5)
	60-69	165 (27.2)
	70-79	70 (11.5)
Highest Level of Education Achieved	High school diploma, GED, or less	175 (28.8)
	Technical training or certificate	46 (7.6)
	Some College or Associates Degree	201 (33.1)
	College degree	111 (18.3)
	Graduate or professional degree	74 (12.2)
Annual Household Income	< $20,000	109 (18.0)
	$20,000 -$35,000	115 (18.9)
	$35,000 - $50,000	103 (17.0)
	$50,000 - $75,000	109 (18.0)
	$75,000 - $100,000	73 (12.0)
	>$100,000	82 (13.5)
	Unknown/Prefer Not to Answer	16 (2.6)
Insurance Type	Private	229 (37.7)
	Government	301 (49.6)
	Uninsured	43 (7.1)
	Other	8 (1.3)
	More than 1 Insurance Policy	26 (4.3)
Relationship Status	Single	129 (21.3)
	Married	268 (44.2)
	Separated or Divorced	150 (24.7)
	Widowed	57 (9.4)
	Other/Unknown/Prefer not to answer	3 (0.5)
Employment Status	Full time	207 (34.1)
	Part time	71 (11.7)
	Not working for pay/Unemployed	121 (19.9)
	Retired	200 (32.9)
	Other/Unknown/ Prefer not to say	8 (1.3)
Country of Birth	United States	555 (91.4)
	Outside of the United States	52 (8.6)
Years of US Residency	Less than 15 years	20 (3.3)
	15+ years	587 (96.7)

Health Seeking Behavior: Most participants (90.8%) had sought health or medical information from various sources at some point (**Table 2**). The internet was the most common first

Table 2. Characteristics of Health Seeking Behaviors

source of health information (80.0%), while 13.6% consulted a doctor or healthcare provider.

	N (%)
	607 (100.0)
Have you ever looked for information about health or medical topics from any source?	551 (90.8)
The most recent time you looked for information about health or medical topics, where did you go first?	551 (100.0)
Doctor or Healthcare Provider	75 (13.6)
Internet	441 (80.0)
Brochure/pamphlet, etc.	10 (1.8)
Friend/Co-Worker	3 (0.5)
Family	11 (2.0)
Cancer organization	2 (0.4)
Newspapers	1 (0.2)
Books	5 (0.9)
Library	2 (0.4)
Telephone information number	1 (0.2)
The most recent time you looked for information about health or medical topics, who was it for?	551 (100.0)
Self	408 (74.0)
Someone else	72 (13.1)
Both oneself and someone else	71 (12.9)
Which of the following sources have you used in the last month as a source of news or information about health topics?	592 (100.0)
Blogs/personal websites	72 (12.2)
Center for Disease Control and Prevention	133 (22.5)
World Health Organization	63 (10.6)
Government	46 (7.8)
Community/faith leaders	19 (3.2)
Online news	256 (43.2)
Email	48 (8.1)
Family and friends	204 (34.5)
Health professionals	282 (47.6)
Radio	22 (3.7)
Podcasts	27 (4.6)
TV	69 (11.7)
Social media	119 (20.1)

Print media	46 (7.8)
Video sharing sites	53 (9.0)
Have you ever looked for information about cancer from any source?	607 (100.0)
Yes	397 (65.4)
No	210 (34.6)
In the past 12 months, have you used the Internet to look for cancer information for yourself?	397 (100.0)
Yes	185 (46.6)
No	212 (53.4)
Where do you access your social media accounts?	603 (100.0)
Computer/laptop	258 (42.8)
iPad/tablet	159 (26.4)
Smartphone	497 (82.4)

Social Media Use and Engagement: 95.6% of respondents used social media. Of these, Facebook was the most popular platform (84.2%) (**Figure 1**) and was used primarily for social interactions (69.4%). YouTube and Instagram were primarily used for entertainment (75.3% and 57.0%, respectively). 18.5% demonstrated a “Low Engagement” pattern regarding social media use.

Trustworthiness of Social Media: The majority of respondents found social media Trustworthy (12.0%) or Neutral (42.3%) for health information. Black or Asian race, younger age, and longer duration of US residency were associated with greater trust in social media. 45.6% noted social media to be “Untrustworthy” (**Table 3**).

Figure 1. Distribution of Social Media Platform Use

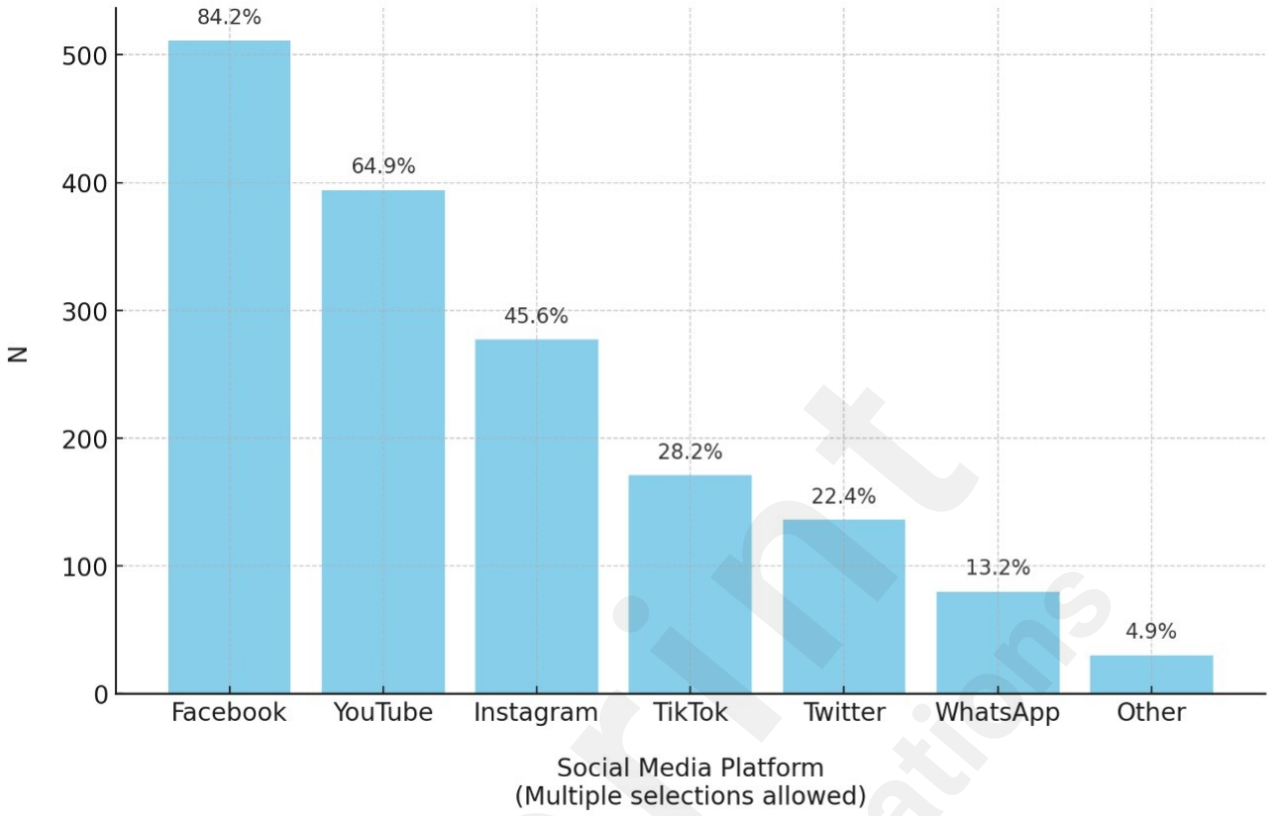


Table 3: Factors Associated with Perceived Trustworthiness of Social Media

	Trustworthy	Neutral	Untrustworthy	*N(%)*	*p=*
	73 (12.0)	257 (42.3)	277 (45.63)	607 (100.00)	
Ethnicity					0.14
Non-Hispanic	64 (11.5)	233 (41.9)	259 (46.58)	556 (100.0)	
Hispanic	9 (18.8)	23 (47.9)	16 (33.33)	48 (100.0)	
Unknown/Prefer not to answer	0 (0.08)	1 (33.3)	2 (66.67)	3 (100.0)	
Race					0.003*
White	49 (10.2)	194 (40.4)	237 (49.4)	480 (100.0)	
Black	14 (19.4)	32 (44.4)	26 (36.1)	72 (100.0)	
Asian	7 (25.9)	15 (55.6)	5 (18.5)	27 (100.0)	
Native American or Alaskan Native	2 (12.5)	7 (43.8)	7 (43.8)	16 (100.0)	
Native Hawaiian or other Pacific Islander	0 (0.0)	0 (0.00	0 (0.0)	0 (100.0)	
Other/Prefer not to Answer	1 (8.3)	9 (75.0)	2 (16.7)	12 (100.0)	
Age					<0.001*
35-39	17 (20.7)	33 (40.2)	32 (39.0)	82 (100.0)	
40-49	20 (14.2)	68 (48.2)	53 (37.6)	141 (100.0)	
50-59	13 (8.7)	71 (47.7)	65 (43.6)	149 (100.0)	
60-69	11 (6.7)	67 (40.6)	87 (52.7)	165 (100.0)	
70-79	12 (17.1)	18 (25.7)	40 (57.1)	70 (100.0)	
Highest Level of Formal Education Achieved					0.400

High school diploma, GED, or less	24 (13.7)	81 (46.3)	70 (40.0)	175 (100.0)	
Technical training or certificate	5 (10.9)	19 (41.3)	22 (47.8)	46 (100.0)	
Some years of college or Associates Degree	23 (11.4)	92 (45.8)	86 (42.8)	201 (100.0)	
College degree	12 (10.8)	40 (36.0)	59 (53.2)	111 (100.0)	
Graduate or professional degree	9 (12.2)	25 (33.7)	40 (54.1)	74 (100.0)	
Annual Household Income					0.63
< $20,000	11 (10.1)	53 (48.6)	45 (41.3)	109 (100.0)	
$20,000 -$35,000	17 (14.8)	48 (41.7)	50 (43.5)	115 (100.0)	
$35,000 - $50,000	15 (14.6)	47 (45.6)	41 (39.8)	103 (100.0)	
$50,000 - $75,000	12 (11.0)	43 (39.5)	54 (49.5)	109 (100.0)	
$75,000 - $100,000	10 (13.7)	24 (32.9)	39 (53.4)	73 (100.0)	
>$100,000	8 (9.8)	35 (42.7)	39 (47.6)	82 (100.0)	
Unknown/Prefer Not to Answer	0 (0.0)	7 (43.8)	9 (56.3)	16 (100.0)	
Insurance Type					0.160
Private	28 (12.2)	98 (42.8)	103 (45.0)	229 (100.0)	
Government	42 (14.0)	123 (40.9)	136 (45.2)	301 (100.0)	
Uninsured	1 (2.3)	24 (55.8)	18 (41.9)	43 (100.0)	
Other insurance or more than 1 policy	2 (5.9)	12 (35.3)	20 (58.8)	34 (100.0)	
Relationship Status					0.79
Single	15 (11.6)	58 (45.0)	56 (43.4)	129 (100.0)	
Married	33 (12.3)	102 (38.1)	133 (49.6)	268 (100.0)	
Separated or Divorced	18 (12.0)	70 (46.6)	62 (41.3)	150 (100.0)	
Widowed	7 (12.3)	25 (43.9)	25 (43.9)	57 (100.0)	
Other/Unknown/ Prefer not to answer	0 (0.0)	2 (66.7)	1 (33.3)	3 (100.0)	
Employment Status					0.09
Full time	22 (10.6)	96 (46.4)	89 (43.0)	207 (100.0)	
Part time	10 (14.1)	31 (43.7)	30 (42.3)	71 (100.0)	
Not working for pay/Unemployed	17 (14.1)	58 (47.9)	46 (38.0)	121 (100.0)	
Retired	24 (12.0)	68 (34.0)	108 (54.0)	200 (100.0)	
Other/Unknown/ Prefer not to say	0 (0.0)	1 (50.0)	1 (50.0)	2 (100.0)	
Country of Birth					0.28
United States	64 (11.5)	233 (41.98)	258 (46.49)	555 (100.0)	
Outside of the United States	9 (17.3)	24 (46.15)	19 (36.54)	52 (100.0)	
Years of US Residency					0.004*
Less than 15 years	7 (35.0)	8 (40.0)	5 (25.0)	20 (100.0)	
15+ years	66 (11.2)	249 (42.4)	272 (46.3)	587 (100.0)	
Platforms used (Multiple Selections Allowed)					--
Facebook	65 (12.7)	220 (43.1)	226 (44.2)	511 (100.0)	
Twitter	23 (16.9)	65 (47.8)	48 (35.3)	136 (100.0)	

Instagram	35 (12.6)	125 (45.1)	117 (42.2)	277 (100.0)
YouTube	53 (13.0)	179 (45.4)	162 (41.1)	394 (100.0)
WhatsApp	17 (21.3)	34 (42.5)	29 (36.3)	80 (100.0)
TikTok	22 (12.9)	85 (49.7)	64 (37.4)	171 (100.0)
Other/Unknown	4 (13.3)	10 (33.3)	16 (53.3)	30 (100.0)

Among social media platforms, the highest trust was noted among WhatsApp users (21.3%), followed by Twitter users (16.9%). Amongst those who used Facebook, the most frequently used platform, 12.7% reported trust in social media for health information.

Use of Cancer Information or Decision Aids through Social Media: Participants who considered social media 'Trustworthy' were more likely to view cancer information (83.6%) or click on a decision aid through social media (83.6%) than those who viewed social media as 'Untrustworthy' (view: 48.0%; click: 45.1%) **(Table 4 and 5)**. Younger participants, particularly those aged 30-39 were more likely to view cancer-related information through social media. Only 12.2% of the 35-39 age group rated their likelihood as 'Unlikely', compared to 32.7% of those aged 60-69. There was no statistically significant difference for age and accession of a social media decision aid tool (p=0.062). The ‘Overall Social Media Engagement Score’ was associated with increased likelihood of viewing cancer treatment-related information and accessing a decision aid on social media (Spearman's rho= 0.210, p<0.001 and Spearman's rho =0.203, p < .001, respectively)

Variable	Likelihood of Viewing Cancer-Related Health Information Seen on Social Media			*N(%)*	*p=*
	Unlikely	Neutral	Likely		
	141 (23.23)	82 (13.51)	384 (63.26)	607 (100.0)	
Trustworthiness of Social Media					<0.001*
Untrustworthy	99 (35.7)	45 (16.2)	133 (48.0)	277 (100.0)	
Neutral	36 (14.0)	31 (12.1)	190 (73.9)	257 (100.0)	
Trustworthy	6 (8.2)	6 (8.2)	61 (83.6)	73 (100.0)	
Ethnicity					0.863
Hispanic	130 (23.4)	75 (13.5)	351 (63.1)	556 (100.0)	
Non-Hispanic	11 (22.9)	6 (12.5)	31 (64.6)	48 (100.0)	

Unknown/Prefer not to answer	0 (0.0)	1 (33.3)	2 (66.7)	3 (100.0)	
Race					0.165
White	110 (22.9)	68 (14.2)	302 (62.9)	480 (100.0)	
Black	23 (31.9)	9 (12.5)	40 (55.6)	72 (100.0)	
Asian	4 (14.8)	2 (7.4)	21 (77.8)	27 (100.0)	
Native American or Alaskan Native	2 (12.5)	3 (18.8)	11 (68.8)	16 (100.0)	
Native Hawaiian or Pacific Islander	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.00)	
Other/Prefer not to Answer	2 (16.7)	0 (0.0)	10 (83.3)	12 (100.0)	
Age					0.008*
35-39	10 (12.2)	15 (18.3)	57 (69.5)	57 (100.0)	
40-49	27 (19.1)	20 (14.2)	94 (66.7)	94 (100.0)	
50-59	31 (20.8)	15 (10.1)	103 (69.1)	103 (100.0)	
60-69	54 (32.7)	22 (13.3)	89 (53.9)	89 (100.0)	
70-79	19 (27.1)	10 (14.3)	41 (58.6)	41 (100.0)	
Highest Level of Education Attained					0.654
High school diploma, GED, or less	36 (20.6)	25 (14.3)	114 (65.1)	175 (100.0)	
Technical training or certificate	11 (23.9)	8 (17.4)	27 (58.7)	46 (100.0)	
Some College or Associates Degree	43 (21.4)	27 (13.4)	131 (65.2)	201 (100.0)	
College degree	29 (26.1)	13 (11.7)	69 (62.2)	111 (100.0)	
Graduate or professional degree	22 (29.7)	9 (12.2)	43 (58.1)	74 (100.0)	
Annual Household Income					0.830
< $20,000	25 (22.9)	20 (18.3)	64 (58.7)	109 (100.0)	
$20,000 -$35,000	23 (20.0)	16 (13.9)	76 (66.1)	115 (100.0)	
$35,000 - $50,000	29 (28.2)	8 (7.8)	66 (64.1)	103 (100.0)	
$50,000 - $75,000	24 (22.0)	18 (16.5)	67 (61.5)	109 (100.0)	
$75,000 - $100,000	20 (27.4)	7 (9.6)	46 (63.0)	73 (100.0)	
>$100,000	16 (19.5)	10 (12.2)	56 (68.3)	82 (100.0)	
Unknown/Prefer Not to Answer	4 (25.0)	3 (18.8)	9 (56.2)	16 (100.0)	
Insurance Type					0.387
Private	50 (21.8)	28 (12.2)	151 (65.9)	229 (100.0)	
Government	74 (24.6)	40 (13.3)	187 (62.1)	301 (100.0)	
Uninsured	6 (14.0)	9 (20.9)	28 (65.1)	43 (100.0)	
Other insurance/More than 1 policy	11 (32.4)	5 (14.7)	18 (52.9)	34 (100.0)	
Relationship Status					0.292
Single	34 (26.4)	19 (14.7)	76 (58.9)	129 (100.0)	
Married	56 (20.9)	32 (11.9)	180 (67.2)	268 (100.0)	
Separated or Divorced	36 (24.0)	20 (13.3)	94 (62.7)	150 (100.0)	
Widowed	15 (26.3)	10 (17.5)	32 (56.1)	57 (100.0)	
Other/Unknown/Prefer not to answer	0 (0.0)	1 (33.3)	2 (66.7)	3 (100.0)	
Employment Status					0.011*
Full time	37 (17.9)	32 (15.5)	138 (66.7)	207 (100.0)	
Part time	19 (26.8)	8 (11.3)	44 (62.0)	71 (100.0)	
Not working for pay/Unemployed	26 (21.5)	7 (5.8)	88 (72.7)	121 (100.0)	
Retired	57 (28.5)	34 (17.0)	109 (54.5)	200 (100.0)	
Other/Unknown/Prefer not to say	2 (25.0)	1 (12.5)	5 (62.5)	8 (100.0)	
Country of Birth					0.549
United States	128 (23.1)	79 (14.2)	348 (62.7)	555 (100.0)	
Outside the United States	13 (25.0)	3 (5.8)	36 (69.2)	52 (100.0)	
Length of US Residency					0.268
Less than 15 years	3 (15.0)	2 (10.0)	15 (75.0)	20 (100.0)	
15+ years	138 (23.5)	80 (13.6)	369 (62.9)	587 (100.0)	

Table 4. Non-Parametric Analysis of Factors Influencing Viewing of Cancer-Related Health Information on Social Media: Social Media Trustworthiness and Demographic Insights

Table 5. Non-Parametric Analysis of Factors Influencing Clicking on a Decision Aid Seen on Social Media: Social Media Trustworthiness and Demographic Insights

Variable	Likelihood of Clicking on a Decision Aid Seen on Social Media			*N(%)*	*p=*
	Unlikely	Neutral	Likely		
	151 (24.88)	101 (16.64)	355 (68.48)	607 (100.0)	
Trustworthiness of Social Media					<0.001*
Untrustworthy	103 (37.2)	49 (17.7)	125 (45.1)	277 (100.0)	
Neutral	42 (16.3)	46 (17.9)	169 (65.8)	257 (100.0)	
Trustworthy	6 (8.2)	6 (8.2)	61 (83.6)	73 (100.0)	
Ethnicity					0.722
Hispanic	142 (25.5)	89 (16.0)	325 (58.5)	556 (100.0)	
Non-Hispanic	9 (18.8)	11 (22.9)	28 (58.3)	48 (100.0)	
Unknown/Prefer not to answer	0 (0.0)	1 (33.3)	2 (66.7)	3 (100.0)	
Race					0.190
White	121 (25.2)	79 (16.5)	280 (58.3)	480 (100.0)	
Black	22 (30.6)	13 (18.1)	37 (51.4)	72 (100.0)	
Asian	3 (11.1)	4 (14.8)	20 (74.1)	27 (100.0)	
Native American or Alaskan Native	3 (18.8)	4 (25.0)	9 (56.2)	16 (100.0)	
Native Hawaiian or Pacific Islander	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.00)	
Other/Prefer not to Answer	2 (18.2)	1 (9.1)	8 (72.7)	12 (100.0)	
Age					0.062
35-39	12 (14.6)	16 (19.5)	54 (65.9)	57 (100.0)	
40-49	28 (19.9)	25 (17.7)	88 (62.4)	94 (100.0)	
50-59	35 (23.5)	26 (17.4)	88 (59.1)	103 (100.0)	
60-69	53 (32.1)	25 (15.2)	87 (52.7)	89 (100.0)	
70-79	23 (32.9)	9 (12.9)	38 (54.3)	41 (100.0)	
Highest Level of Education Attained					0.482
High school diploma, GED, or less	38 (21.7)	33 (18.9)	104 (59.4)	175 (100.0)	
Technical training or certificate	12 (26.1)	9 (19.6)	25 (54.3)	46 (100.0)	
Some College or Associates Degree	47 (23.4)	34 (16.9)	120 (59.7)	201 (100.0)	
College degree	28 (25.2)	15 (13.5)	68 (61.3)	111 (100.0)	
Graduate or professional degree	26 (35.1)	10 (13.5)	38 (51.4)	74 (100.0)	
Annual Household Income					0.429
< $20,000	30 (27.5)	22 (20.2)	57 (52.3)	109 (100.0)	
$20,000 -$35,000	24 (20.9)	20 (17.4)	71 (61.7)	115 (100.0)	
$35,000 - $50,000	28 (27.2)	14 (13.6)	61 (59.2)	103 (100.0)	
$50,000 - $75,000	26 (23.9)	24 (22.0)	59 (54.1)	109 (100.0)	
$75,000 - $100,000	23 (31.5)	6 (8.2)	44 (60.3)	73 (100.0)	
>$100,000	16 (19.5)	11 (13.4)	55 (67.1)	82 (100.0)	
Unknown/Prefer Not to Answer	4 (25.0)	4 (25.0)	8 (50.0)	16 (100.0)	
Insurance Type					0.541
Private	44 (21.3)	38 (18.4)	125 (60.4)	229 (100.0)	
Government	13 (18.3)	13 (18.3)	45 (63.4)	301 (100.0)	
Uninsured	28 (23.1)	15 (12.4)	78 (64.5)	43 (100.0)	
Other insurance/More than 1 policy	63 (31.5)	34 (17.0)	103 (51.5)	34 (100.0)	
Relationship Status					0.372
Single	39 (30.2)	18 (14.0)	72 (55.8)	129 (100.0)	
Married	58 (21.6)	44 (16.4)	166 (61.9)	268 (100.0)	
Separated or Divorced	40 (26.7)	25 (16.7)	85 (56.7)	150 (100.0)	
Widowed	14 (24.6)	13 (22.8)	30 (52.6)	57 (100.0)	
Other/Unknown/Prefer not to answer	0 (0.0)	1 (33.3)	2 (66.7)	3 (100.0)	

Employment Status					0.046*
Full time	44 (21.3)	38 (18.4)	125 (60.4)	207 (100.0)	
Part time	13 (18.3)	13 (18.3)	45 (63.4)	71 (100.0)	
Not working for pay/Unemployed	28 (23.1)	15 (12.4)	78 (64.5)	121 (100.0)	
Retired	63 (31.5)	34 (17.0)	103 (51.5)	200 (100.0)	
Other/Unknown/Prefer not to say	3 (37.5)	1 (12.5)	4 (50.0)	8 (100.0)	
Country of Birth					1.00
United States	137 (24.7)	94 (16.9)	324 (58.4)	555 (100.0)	
Outside of the United States	14 (26.9)	7 (13.5)	31 (59.6)	52 (100.0)	
Length of US Residency					0.186
Less than 15 years	2 (10.0)	4 (20.0)	14 (70.0)	20 (100.0)	
15+ years	149 (25.4)	97 (16.5)	341 (58.1)	587 (100.0)	

Figure 2. Mean Likelihood of Clicking on a Decision Aid Seen on Social Media by Overall Social Media Engagement Scores

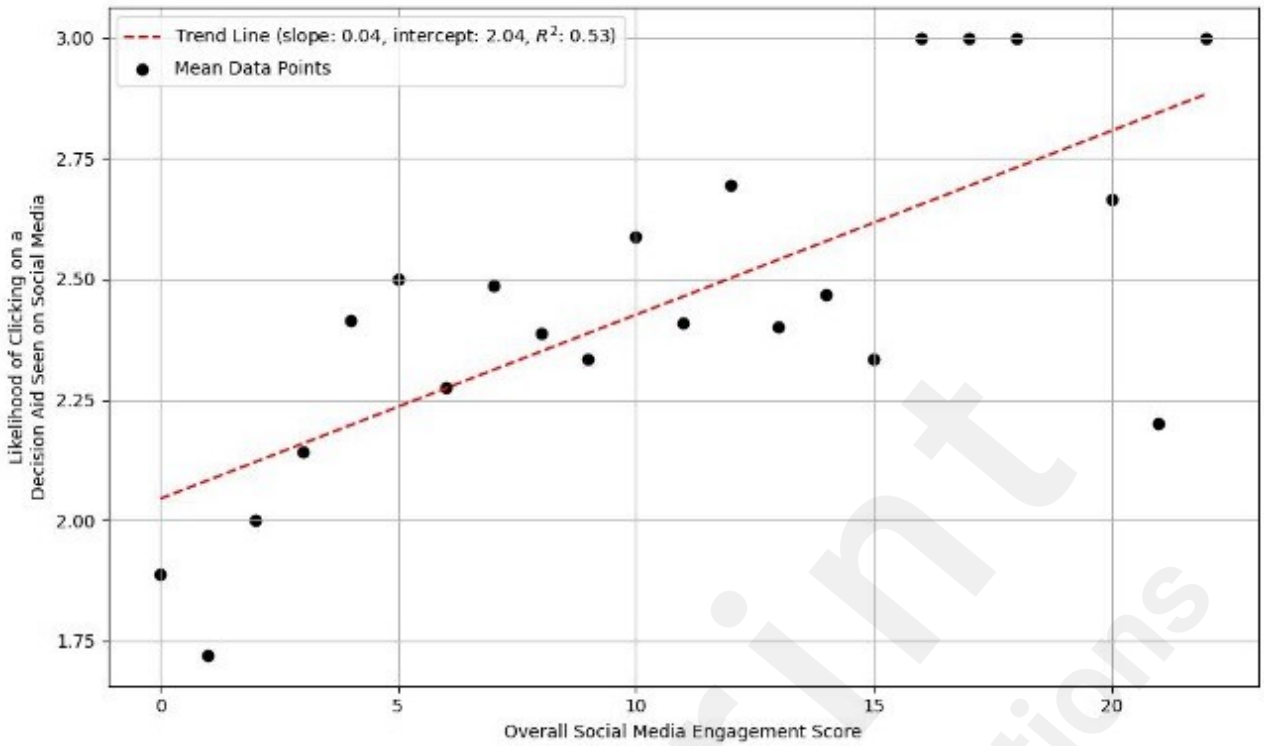
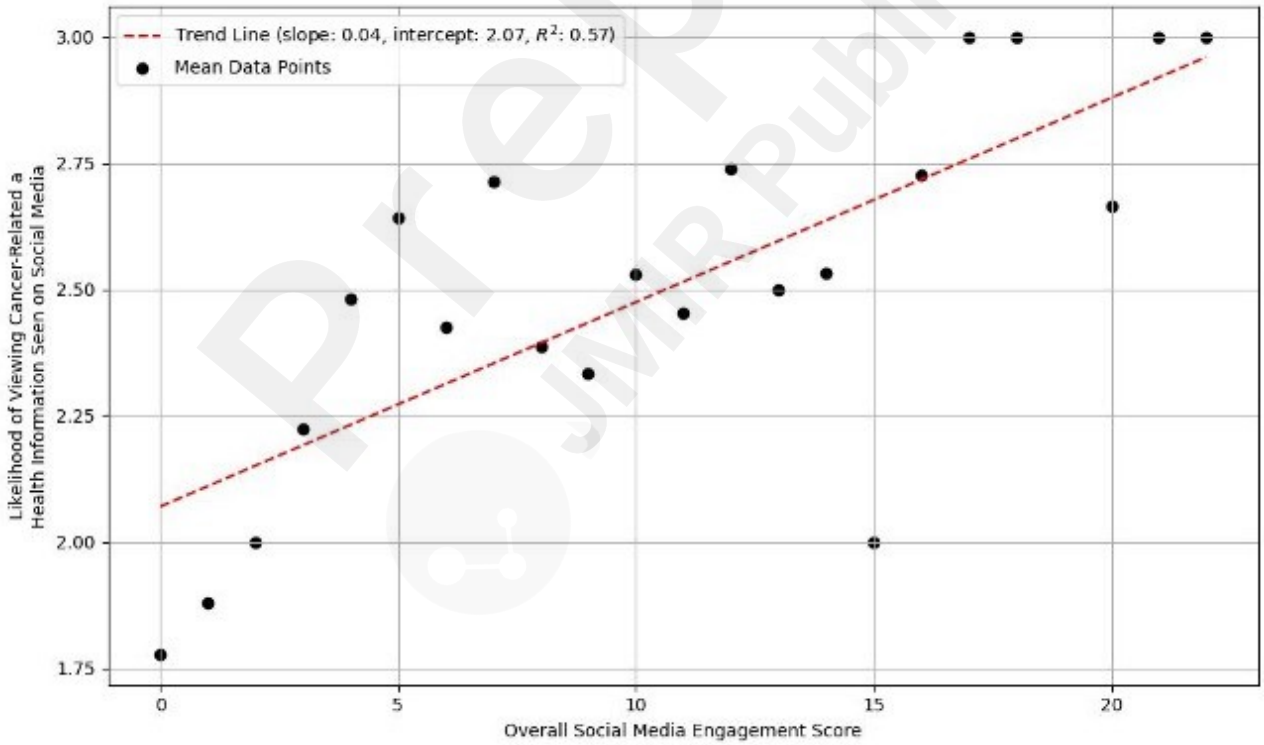


Figure 3. Mean Likelihood of Viewing Cancer-Related Health Information Seen on Social Media by Overall Social Media Engagement Scores



Discussion:

Our study findings support our hypothesis that cancer decision aids can be effectively

disseminated on social media to women, given the high rates of social media use and the large number of people reporting searching for cancer-related information on the Internet. Overall social media usage was high, with almost half of the respondents reporting moderate-high to high engagement. We found that about two-thirds of participants searched for cancer-related information, and nearly half of those used the Internet to seek such information for themselves in the past year. The findings also demonstrate that those who trust social media for health information, particularly Black and Asian individuals, younger individuals, and those who have lived in the US for less than 15 years, could especially benefit from the availability of cancer decision aids on social media. Additionally, increased frequency of social media use was associated with a higher likelihood of engaging with cancer treatment information and decision aids found on social platforms. Collectively, these findings underscore the substantial potential to increase the use of social media as a platform for health information dissemination, given its already widespread use, by developing strategies that attract a wider and more diverse audience to seek health-related content online.

Our study also revealed variations in the use of different social media platforms. Facebook was the predominant platform used by our survey respondents, aligning with recent national data that Facebook is the most used social media site.[28] Additionally, Facebook and YouTube scored highest on quality criteria for consumer health information, indicating their potential reliability for medical video content.[29] Conversely, WhatsApp recorded the highest proportion of users perceiving it as a trustworthy source for health information. Although not as popular as other mainstream platforms, WhatsApp has an increasing popularity among immigrant and Latino/Hispanic populations in the U.S.[30] These findings emphasize the importance of selecting a social media platform that has the capability to present information in different media forms (short text, video, photographs, polls, etc.), as each of these platforms is inherently different in its design, interaction type, and media presentation and may be used to reach specific sub-audiences. Further studies should be direct towards exploring which platforms may be better suited for delivery of different forms of content.

When participants were asked regarding their likelihood of viewing cancer treatment information or clicking on a decision aid on social media, results showed that the majority were likely to interact with this content. Integrating two primary concepts of this study—trust in social media and the likelihood of engaging with health-related content on these platforms—our findings suggest that individuals who view social media as a trustworthy source of health information were more likely to interact with cancer-related treatment information posted on social media. Numerous consumer studies have highlighted that credibility or trust in the source significantly influences engagement. [31–33] However, trust is a multifaceted construct influenced by a variety of factors, including demographics, past experiences, and societal and cultural norms, as evidenced in this study. [34] When considering a decision aid, one should consider assessing the needs and beliefs of the target population to avoid creating potential for mistrust in provided information.

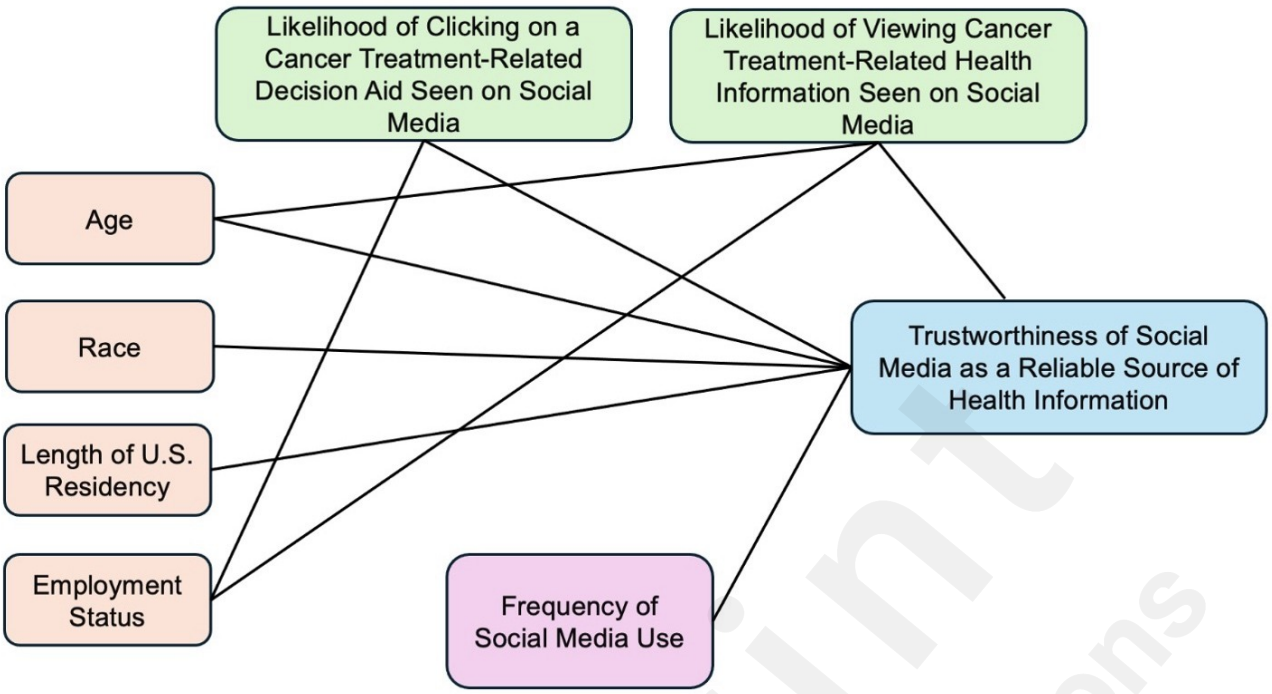
Our analysis reveals significant demographic differences in trust in social media for health information, with notable variations observed across race, age, and years of US residency. Asian and Black participants reported higher trust levels in social media platforms, aligning with studies indicating cultural backgrounds influence trust in social media content.[35] Younger participants demonstrated a higher interest in accessing cancer-related information via social media, although they were not more inclined to use decision aids through these platforms. While income, educational attainment, marital status, and insurance type did not significantly correlate with trust in social media or engagement with health information, employment status did. It is possible that employment status findings are due to age differences within employment categories; future work should explore demographic differences in social media use and trust.

While existing studies indicate that social media is increasingly used for seeking cancer information, our study did not specifically query respondents on their current use of social media for this purpose.[36] Instead, we focused on general internet use, which revealed that 46.6% of participants (185 out of 397) sought cancer information online. Evidence suggests that a cancer

diagnosis can significantly motivate individuals to engage actively on social media.[37] This insight is important for future research and initiatives, particularly when considering the dissemination of decision aids within our target population.

Our study served as a steppingstone to understand if there would be any interest in decision aid use for health information. It was not designed to tease out nuanced factors associated online use behavior. As a survey study, it is subject to certain inherent limitations. Our study was subject to selection bias, as participants needed to be proficient in English, have Internet access, and possess the facility to navigate an online survey. While the overall target population size of over 600 was achieved, the sample was not as racially diverse as the general population. However, there was more variation in age, education, and income distribution of respondents. Additionally, as the study exclusively involved female participants, it is important to consider the potential for gender differences in social media use and trust, as previous research indicates that women may be more inclined to trust social media.[38,39] Regarding statistical analysis, the intricate and interconnected relationship between various variables and their collective impact on trust and engagement with health information on social media posed a challenge to definitive delineation **(Figure 4)**. Moreover, potential influences from unmeasured factors, such as medical conditions or personality traits, further complicated understanding these dynamics. [40,41]

Figure 4. Path Analysis of Sociodemographic Variables, Trust in Social Media, and Health Information Interaction



Overall, this study provides key insights into use and trust in social media for health and cancer information, specifically decision aids. To our knowledge, this is the first study to analyze factors related to the acceptability of decision aids and cancer-related information presented through social media. Overall, most demographic factors did not significantly influence use or trust in social media for cancer-related information. This finding suggests that the dissemination of decision aids and cancer-related information could reach a broad audience across demographic groups. The results also underscore that social media's role in health communication is multifaceted, reflecting a web of demographic influences and personal preferences. Additionally, we found variations in usage amongst different social media platforms. This emphasizes the need to better explore factors which influence selection of a social media platform and also, the unique characteristics of each platform in delivery of information and communication. As social media continues to evolve as a key platform for health information, future efforts should focus on strategies that increase trust in social media as a reliable source of health information and address the specific needs and preferences of diverse user groups to maximize the impact of these vital resources.

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FIGURE LEGENDS

Figure 1. Distribution of Social Media Platform Use

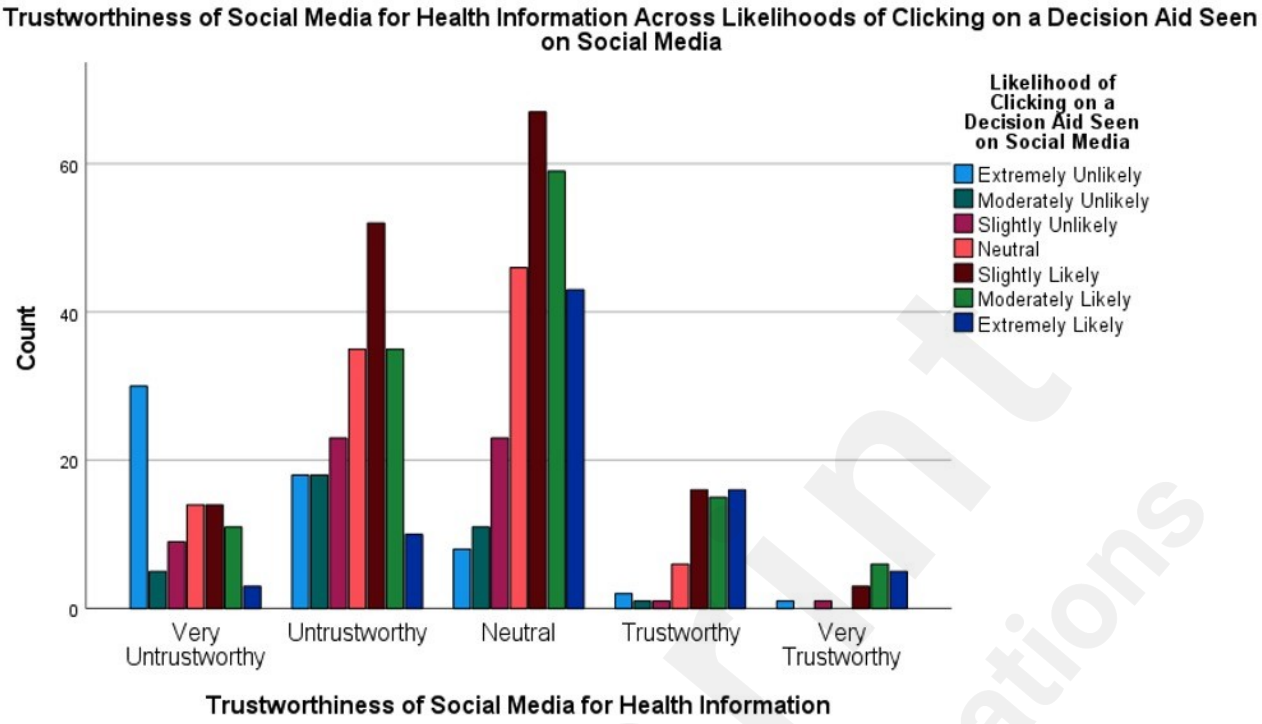
Figure 2. Mean Likelihood of Clicking on a Decision Aid Seen on Social Media by Overall Social Media Engagement Scores

Figure 3. Mean Likelihood of Viewing Cancer-Related Health Information Seen on Social Media by Overall Social Media Engagement Scores

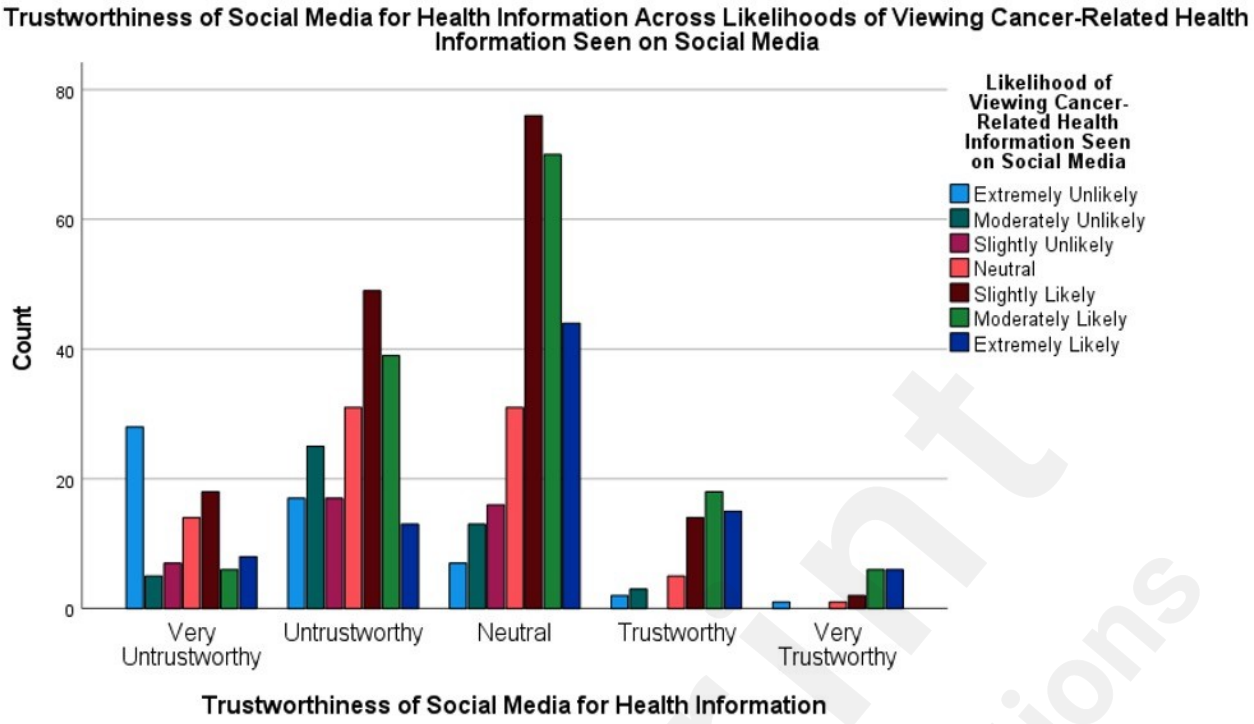
Figure 4. Path Analysis of Sociodemographic Variables, Trust in Social Media, and Health Information Interaction

SUPPLEMENTAL MATERIALS

Supplementary Figure 1. Trustworthiness of social media for health information across likelihoods of clicking on a decision aid seen on social media



Supplementary Figure 2. Trustworthiness of social media for health information across likelihoods of viewing cancer-related health information seen on social media



Appendix A.

Please answer the following survey questions to the best of your ability.

Health-related information behaviors

1. Have you ever looked for information about health or medical topics from any source?
   - □ Yes
   - □ No

2. The most recent time you looked for information about health or medical topics, where did you go **first**?
   - □ Books
   - □ Brochures, pamphlets, etc.
   - □ Cancer organization
   - □ Family
   - □ Friend/Co-worker
   - □ Doctor or healthcare provider
   - □ Internet
   - □ Library
   - □ Magazines
   - □ Newspapers
   - □ Telephone information number
   - □ Complementary, alternative, or unconventional practitioner

3. The most recent time you looked for information about health or medical topics, who was it for?
   - □ Myself
   - □ Someone else
   - □ Both myself and someone else

4. Have you ever looked for information about **cancer** from any source?
   □ Yes
   □ No

5. In the past 12 months, have you used the **Internet** to look for cancer information for yourself?
   □ Yes
   □ No

Sources of health information

6. Which of the following sources have you **used** in the last month as a source of news or information about health topics? Check all that apply:
   □ Blogs/personal websites
   □ Centers for Disease Control and Prevention
   □ Community/faith leaders
   □ Online news
   □ Email
   □ Family and friends
   □ Government (Federal, provincial, local)
   □ Health professionals (Scientists, doctors, public health officials)
   □ Podcasts
   □ Print media (Newspapers, magazines, etc.)
   □ Private messaging apps (WhatsApp, Messenger, WeChat, etc.)
   □ Radio
   □ Social media (Facebook, Weibo, Twitter, Instagram, Weibo, Pinterest, etc.)
   □ TV (Commercials, news programs, entertainment programs, etc.)
   □ Video sharing sites (YouTube, TikTok)
   □ World Health Organization

7. What sources do you **trust** to get accurate health information? Check all that apply:
   □ Blogs/personal websites
   □ Centers for Disease Control and Prevention
   □ Community/faith leaders
   □ Online news
   □ Email
   □ Family and friends
   □ Government (Federal, provincial, local)
   □ Health professionals (Scientists, doctors, public health officials)
   □ Podcasts
   □ Print media (Newspapers, magazines, etc.)
   □ Private messaging apps (WhatsApp, Messenger, WeChat, etc.)
   □ Radio
   □ Social media (Facebook, Weibo, Twitter, Instagram, Weibo, Pinterest, etc.)
   □ TV (Commercials, news programs, entertainment programs, etc.)
   □ Video sharing sites (YouTube, TikTok)
   □ World Health Organization

How trustworthy do you consider the information shared by these sources?

	Very untrustworthy	Untrustworthy	Neither untrustworthy or trustworthy	Trustworthy	Very trustworthy
A. Scientists, doctors	1	2	3	4	5
B. Public health officials	1	2	3	4	5
C. Governments	1	2	3	4	5
D. Traditional news	1	2	3	4	5
E. Social media	1	2	3	4	5
F. Friends and family	1	2	3	4	5
G. Video sharing sites	1	2	3	4	5
H. Community/ Faith leaders	1	2	3	4	5
I. Online forum/discussion board	1	2	3	4	5
J. Online news	1	2	3	4	5

Social media use

8. Where do you access your social media accounts? (Select all that apply)
   - □ Computer/laptop
   - □ iPad or tablet
   - □ Smartphone (iPhone, Android, etc.)

9. What social media sites do you use?
   a. Facebook
   b. Twitter
   c. Instagram
   d. YouTube
   e. WhatsApp
   f. Other _____
   g. I do not use social media

10. How often do you check Facebook?
   - □ Multiple times a day
   - □ Once a day
   - □ At least 3 times a week
   - □ Less than 3 times a week

11. Why do you use Facebook? (Select all that apply)
   - □ Social interactions
   - □ To search for information
   - □ To pass time/Boredom
   - □ Entertainment
   - □ Relaxation
   - □ Communication tool
   - □ To express opinions
   - □ Convenience

- □ To share information
- □ To see what others are doing
- □ Advocacy
- □ To share/maintain my cultural identity
- □ Other: _____ _____

12. How often do you check WhatsApp?
    - □ Multiple times a day
    - □ Once a day
    - □ At least 3 times a week
    - □ Less than 3 times a week

13. Why do you use WhatsApp? (Select all that apply)
    - □ Social interactions
    - □ To search for information
    - □ To pass time/Boredom
    - □ Entertainment
    - □ Relaxation
    - □ Communication tool
    - □ To express opinions
    - □ Convenience
    - □ To share information
    - □ To see what others are doing
    - □ Advocacy
    - □ To share/maintain my cultural identity
    - □ Other: _____

14. How often do you check Twitter?
    - □ Multiple times a day
    - □ Once a day
    - □ At least 3 times a week
    - □ Less than 3 times a week

15. Why do you use Twitter? (Select all that apply)
    - □ Social interactions
    - □ To search for information
    - □ To pass time/Boredom
    - □ Entertainment
    - □ Relaxation
    - □ Communication tool
    - □ To express opinions
    - □ Convenience
    - □ To share information
    - □ To see what others are doing
    - □ Advocacy
    - □ To share/maintain my cultural identity
    - □ Other: _____

16. How often do you check Instagram?
    - □ Multiple times a day
    - □ Once a day
    - □ At least 3 times a week
    - □ Less than 3 times a week

17. Why do you use Instagram? (Select all that apply)
    - □ Social interactions
    - □ To search for information
    - □ To pass time/Boredom
    - □ Entertainment
    - □ Relaxation
    - □ Communication tool
    - □ To express opinions
    - □ Convenience
    - □ To share information
    - □ To see what others are doing
    - □ Advocacy
    - □ To share/maintain my cultural identity
    - □ Other: _____

18. How often do you check YouTube?

- □ Multiple times a day
- □ Once a day
- □ At least 3 times a week
- □ Less than 3 times a week

19. Why do you use YouTube? (Select all that apply)
    - □ Social interactions
    - □ To search for information
    - □ To pass time/Boredom
    - □ Entertainment
    - □ Relaxation
    - □ Communication tool
    - □ To express opinions
    - □ Convenience
    - □ To share information
    - □ To see what others are doing
    - □ Advocacy
    - □ To share/maintain my cultural identity
    - □ Other: _____

20. Imagine that you or a loved one were making a decision about cancer treatment. If you saw information about cancer treatment posted on social media, how likely would you be to view it**?**

□	□	□	□	□	□	□
1						7
Extremely unlikely	2	3	4	5	6	Extremely likely

21. Imagine that you or a loved one were making a decision about cancer treatment. If you saw a decision aid (tool that helps people make decisions) about cancer treatment posted on social media, how likely would you be to click on that decision tool**?**

□	□	□	□	□	□	□
1						7
Extremely unlikely	2	3	4	5	6	Extremely likely

Demographic questions

The next two questions are about your race and ethnicity. To understand more about people who use online health information, we would like to record this using specific categories. First, are you Latino/a/x or Hispanic?

- o Yes
- o No
- o Prefer not to answer

Second, which category or categories best describes you? Mark all answers that apply.

- o African American or Black
- o Asian
- o Caucasian or White
- o Native American or Alaskan Native
- o Native Hawaiian or other Pacific Islander
- o Other (Specify)
- o Prefer not to answer

What is your age?

- o 18-29
- o 30-49
- o 50-64
- o 65 or older

What is the highest level of formal education you have completed?

- Less than high school
- Some high school
- A high school diploma or GED
- Technical training or certificate
- Some years of college or Associates Degree
- A college degree (example: BA, BS, BFA)
- A graduate or professional degree (example: master's degree, PhD, MD, JD)
- Prefer not to answer

What is your annual income, meaning the total pre-tax income from all sources earned in the past year?

- Less than $20,000
- At least $20,000 but less than $35,000
- At least $35,000 but less than $50,000
- At least $50,000 but less than $75,000
- At least $75,000 but less than $100,000
- $100,000 or more
- Prefer not to answer

Are you currently covered by any of the following types of health insurance or health coverage plans? Please select all that apply.

- Private insurance purchased through a current or former employer/union or directly from an insurance company or marketplace.
- Government insurance like Medicare or Medicaid
- No insurance of any type
- Any other type of health insurance coverage or health coverage plan (please specify):

What is your marital status?

- Single
- Married
- Separated
- Divorced
- Widowed
- Prefer not to answer

What is your employment status? You can check all that apply

- I work full time
- I work part time
- I am not working for pay/unemployed
- I am a student
- I am retired

- Prefer not to say

Where were you born?

- United States (including Puerto Rico)
- Outside of the United States.

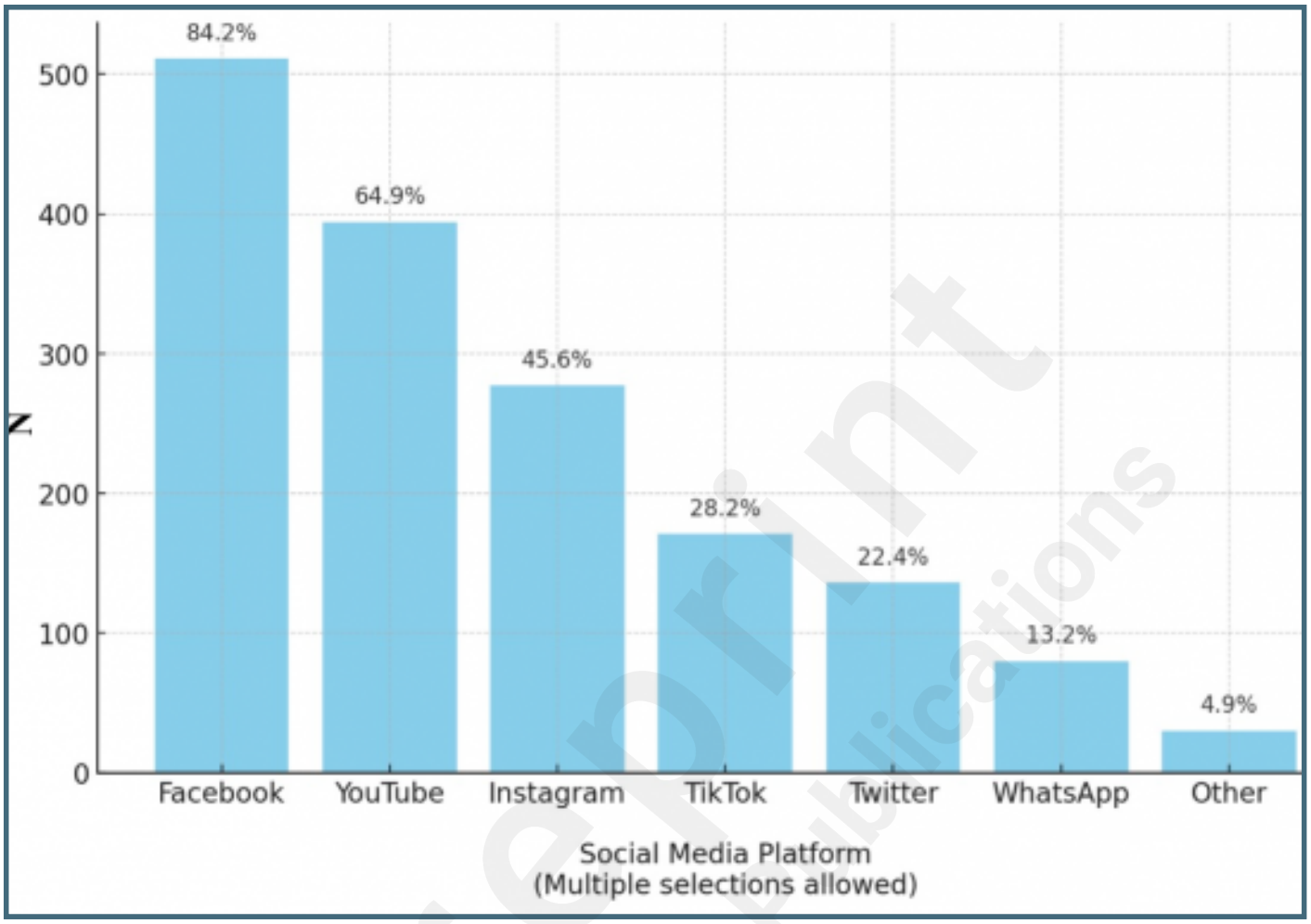
How long have you lived in the United States?

- 1-5 years
- 6-10 years
- 11-15 years
- 15+ years

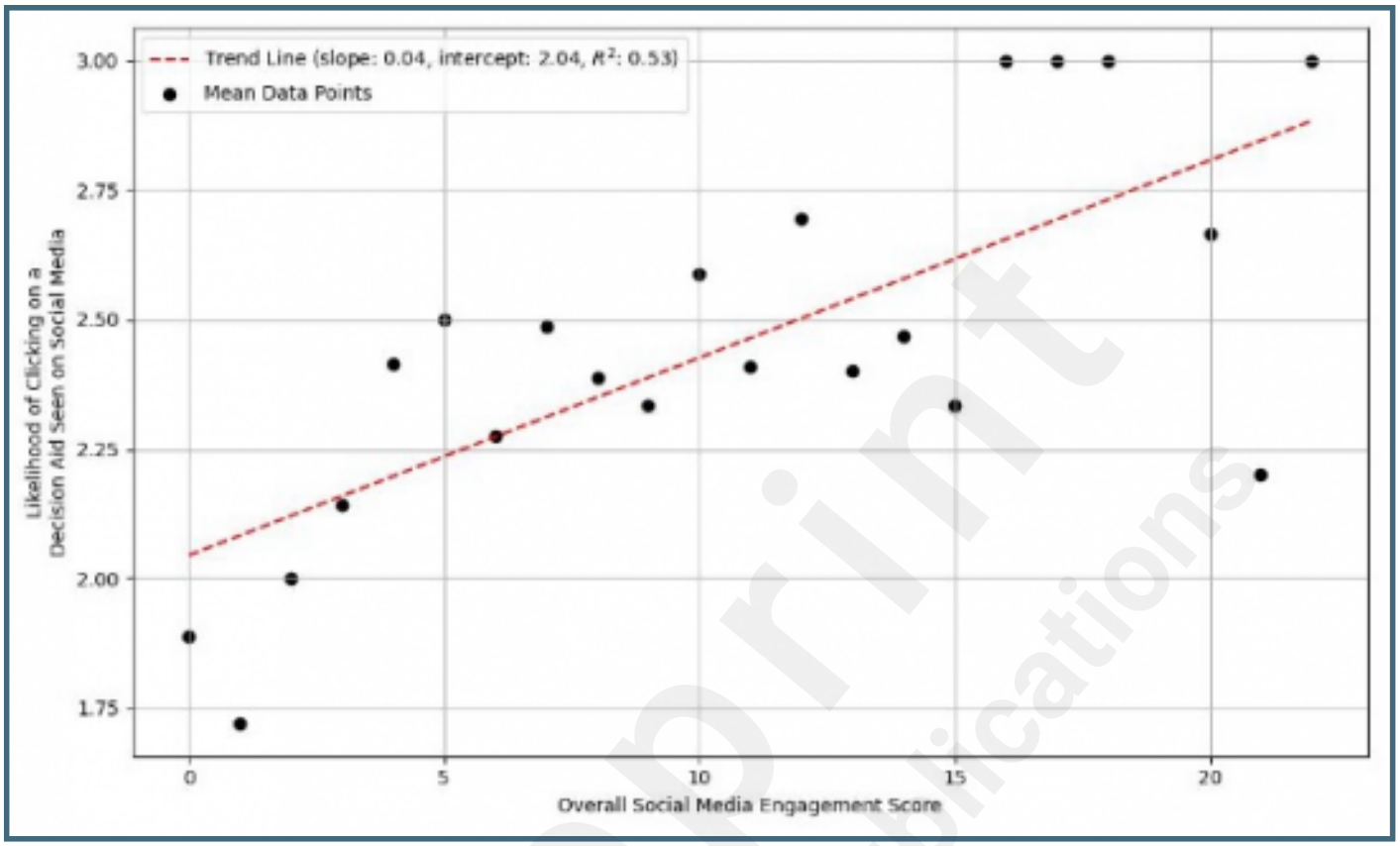
Supplementary Files

Figures

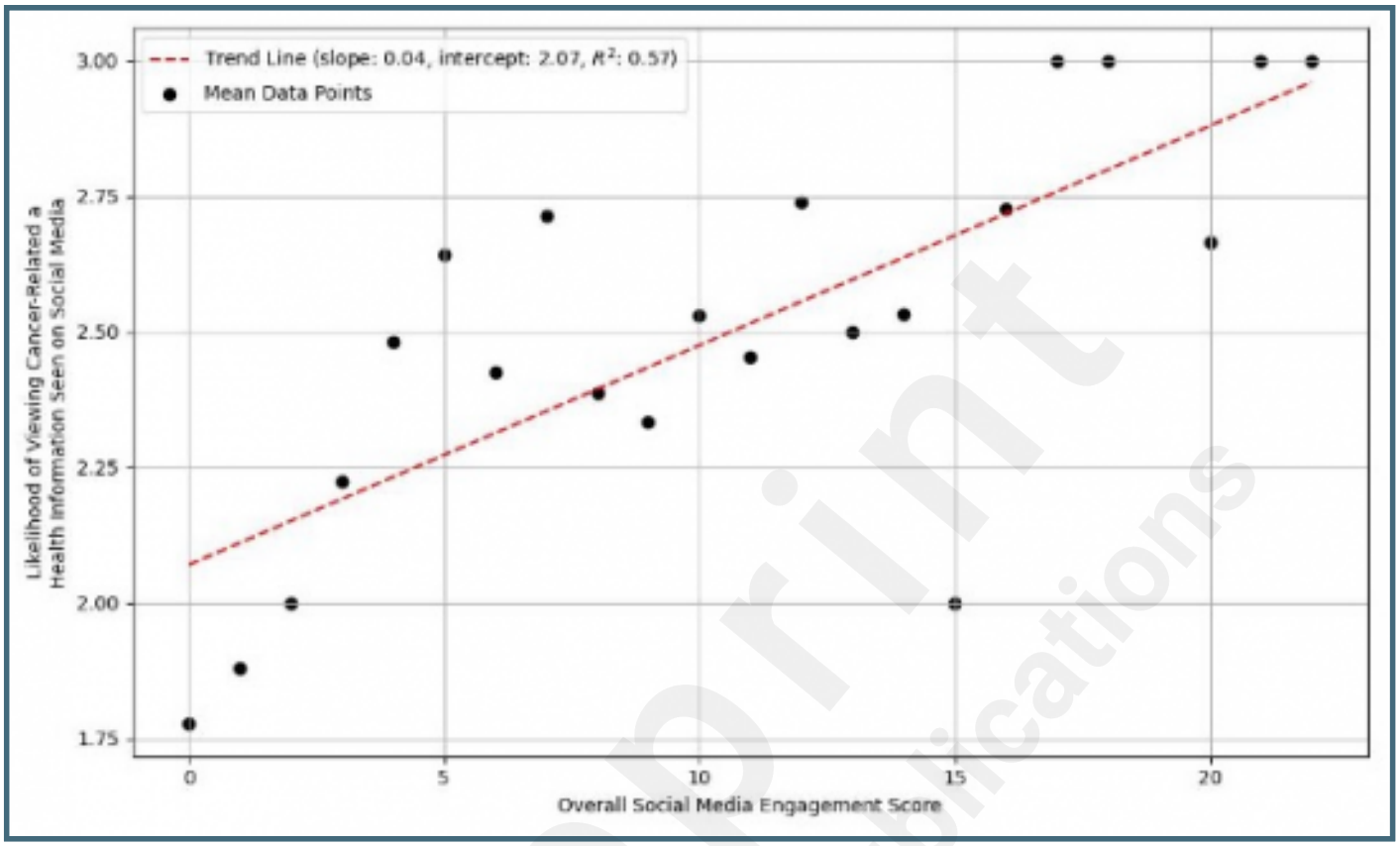
Distribution of social media platform use.



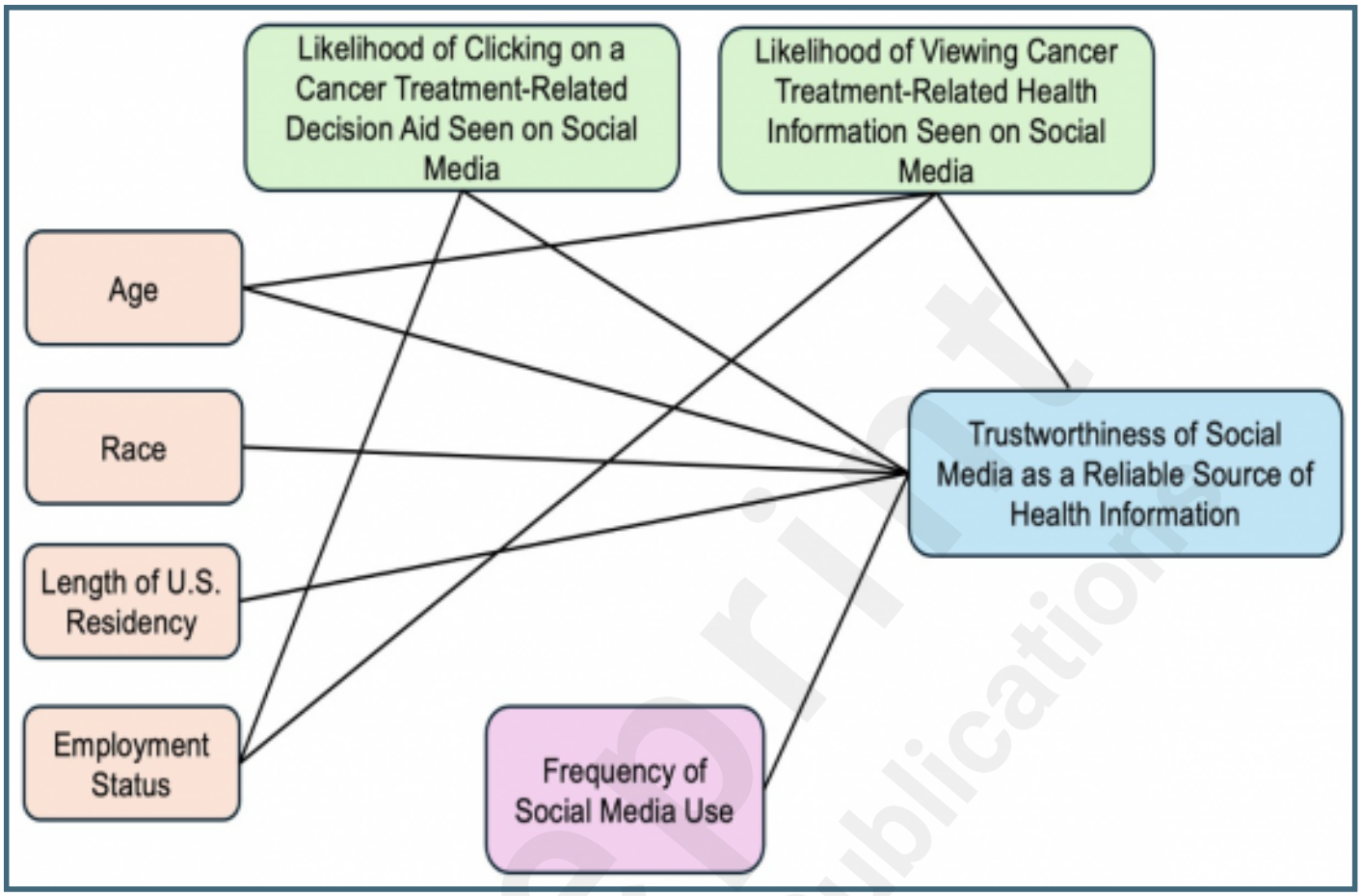
Mean likelihood of clicking on a decision aid seen on social media by overall social media engagement scores.



Mean likelihood of viewing cancer-related health information seen on social media by overall social media engagement scores.



Path analysis of sociodemographic variables, trust in social media, and health information interaction.



Multimedia Appendixes

Supplementary Figure 1. Trustworthiness of social media for health information across likelihoods of clicking on a decision aid seen on social media.
URL: http://asset.jmir.pub/assets/b30158fa4c929ecab824a0a1dc29e377.png

Supplementary Figure 2. Trustworthiness of social media for health information across likelihoods of viewing cancer-related health information seen on social media.
URL: http://asset.jmir.pub/assets/3f90fb29246baf854d56a5280d9d7a9d.png

Survey.
URL: http://asset.jmir.pub/assets/169f0abbaca1a7b6c81cc8f06d4c4d25.docx