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A Statistical Examination of Information Seeking and Misinformation Exposure on Social Media

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Abstract: In the present age of rampant misinformation, social media has become a primary source of information among the young generation. This study examines how students obtain information from social media platforms as they navigate the complex information landscape. A survey conducted among 121 students at Lovely Professional University was analyzed using descriptive statistics, the Anderson-Darling test, the T-test, ANOVA and the Chi-Square test. The results revealed that information seeking was the most important reason for using social media. There is no significant difference in information-seeking behaviour among males and females or Indian and international students. However, while seeking information, the possibility of coming across misinformation remains. The results suggested fake news, misleading content, political information and conspiracy theories as the most prevalent misinformation available on social media platforms. Nonetheless, when it comes to combating misinformation, users have suggested measures such as fact-checking, improved algorithms, utilizing artificial intelligence, promoting credible sources, and gatekeeping to address misinformation. The importance of digital literacy and acting as responsible netizens was also highlighted. This research contributes to the understanding that information seeking on social media is not influenced by either gender or nationality, thereby challenging assumptions regarding demographics having any effect on the digital behaviour of users. Various Stakeholders, including educators, librarians, policymakers, and social media platform designers, can utilise these insights to encourage information seeking while countering misinformation.

Keywords: Information Seeking, Misinformation, Misinformation Combat, Social Media

1 Introduction

With the emergence of the internet, particularly social media, there has been an exponential shift in the information-seeking behaviour of the general public. In recent years, the nature of information consumption, assimilation, and circulation has undergone drastic changes [1]. Nowadays, people have access to humongous amounts of information that bear on their past, present, and future [2]. Social media has become a revolutionary tool for social interaction and information transmission and has drastically altered practically every aspect of life and work [3]. The unique features of social media, like likes, shares, and comments, increase user participation. With multiple conversations occurring simultaneously, it can be inferred that engagement is central to social media, barring location and time. Such varied participation might not be possible without social media [4]. Similarly, social media learning is characterised as connective. The main goal behind joining communities is to allow conversational exchange between learners and the learned [5]. Being duplex in nature, social media, when compared with simplex-natured traditional media, enables users to produce, consume as well and share information [6].

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Since various platforms have distinctive features and utilities, students tend to use them to find different kinds of information. A considerable number of students who are on platforms like Facebook, Instagram, X, etc., inherently prefer social media as the primary source of information [7]. Seeking or simply accessing information in a digital age has shifted from knowing what, how, and where to learn to knowing how to process information cognitively and more effectively [8]. The plethora of information available online is so vast that the average human cannot possibly digest it all [9]. Furthermore, social media has become a hub of misinformation and has affected the information landscape tremendously [10]. Even though millions of young students use social media platforms but not much is known about what they seek there and how they navigate through loads of information. Cultural resistance, pedagogical issues or institutional constraints further restrict the use of social media, and therefore, there are many differences in the way social media is perceived by academics [11]. Furthermore, the doubts related to the reliability of information on social media hinder its development as an effective, innovative tool for seeking information [12][13]. Hence, it is imperative to understand how students navigate the current social media landscape to seek information in an environment which is predominantly filled with challenges like misinformation, information overload, credibility issues and a lack of digital literacy.

1.1 Age of misinformation

Misinformation refers to false information. Given the ease with which information is shared on social media, misinformation can circulate quickly and widely and may result in negative consequences [14]. Southwell and others defined misinformation as any information that has been created and promoted deliberately; however, its propagation may or may not be accidental [15]. The intent behind its spread might be to increase reach and possibly a false sense of accomplishment [16]. Regardless of the good or bad intentions of the information creators, such misinformation may cause serious consequences for consumers of the information [17].

Numerous scientific and journalistic articles claim that online misinformation is the source of many contemporary sociopolitical issues while neglecting deeper factors such as the decline of trust in institutions or in the media [18][19][20]. Laato, with other researchers, did a cross-sectional study on information sharing and cyberchondria and concluded that information overload might be responsible for the propagation of misinformation due to human factors [21]. Therefore, it can be inferred that a lack of scientific knowledge by individuals and a lack of trust in the government have increased the consumption of misinformation, which is disseminated quickly by the unregulated media, particularly social media [22]. Exposure to misinformation is not always intentional. Sometimes, users might come across misinformation while casually scrolling on social media [23]. Presently, social media is considered responsible for its amplification at a humongous level by weakening traditional gatekeepers and fact-checkers, exacerbating the current issue of misinformation [24]. Consequently, it becomes pertinent to understand the effects of misinformation on the information landscape and find ways to combat information disorders.

With prior research focusing mainly on the role of social media in education, there remains a lack of focused investigation into how students engage with these platforms to satisfy their information needs. There remains a lack of statistical evidence regarding information-seeking tendencies of users who are simultaneously being exposed to misinformation. The study also attempts to analyse the susceptibility of users to failing to recognise misinformation. Furthermore, this gap highlights the need to find ways to educate students on the demerits of misinformation, using critical thinking and information literacy as an impetus to combat the nuances of information disorders, since the research on this topic is still limited.

2 Review of Literature

Social media has been viewed as a source of information, and the more people know, the more they seek information [25][26]. Nowadays, people prefer using social media to seek information instead of traditional information sources because of faster obtainability, higher accessibility, and enriched content [27]. Not only has it made the dissemination of information much easier, but it has also enabled the creation and exchange of user-generated content [28][29]. College students are usually found to be more active on social media sites, and a sizeable amount of them use it for information seeking [30].

On the other hand, social media has become the main source for the dissemination of false and misleading information since it allows the sharing of information on a large scale. This abuse of social media has brought a lot of damage [31][32]. Social media also lacks mechanisms that can help in quality control and gatekeeping [33]. Hence, widespread misinformation on social media is a cause for concern and is considered a threat by many. Misinformation hinders an individual's information-seeking capabilities and triggers motivated processing to protect their pre-existing attitudes or beliefs [34]. While exposed to misinformation on social media, individuals tend to focus more on its "relevance, shock

value, and believability rather than its source", resulting in its amplification [35][36]. Trust issues, less experience, lack of critical thinking skills, and negligence in verifying the information are some of the reasons that contribute to the further amplification of misinformation [37]. Hence, students who lack critical thinking and digital literacy often fall for misinformation and struggle to navigate through humongous amounts of misinformation. This often leads to avoidance and hinders the information-seeking capabilities of users [38]. Therefore, the lack of better information skills of students hinders the information-seeking process [39]. For this reason, students need to be guided properly to prevent them from the risks associated with social media platforms [40]. Also, there is a need to raise awareness, provide credible information, work on strengthening library collections and research support services, provide literary interventions and share best practices in conferences and other forums [41][42].

2.1 Objectives

The main objectives of this exploratory study are to understand the different characteristics of the students who seek information on social media, their motivations, and their reasons for doing so. Moreover, impetus will be given to the misinformation prevalent on social media. The goal is to understand the motivations of seeking and consuming information and thereby find ways to combat misinformation. Furthermore, to emphasise the importance of critical thinking and information literacy as effective solutions to misinformation. The study attempts to achieve the following objectives:

1.To find the extent to which social media is used for seeking information among different demographic groups.
2.To analyse users' gullibility and lack of knowledge in recognising misinformation on social media platforms.
3.To determine what type of information students seek on social media platforms.

2.2 Scope and limitations of the study

The scope of the study is limited to undergraduate and graduate students at Lovely Professional University, India.

3 Methodology

This quantitative study is non-experimental and cross-sectional in nature. This exploratory study is on a topic which is still in its early stages. Differences among various groups within the sample have also been analyzed. The data are presented through graphs and tables. To provide a clear and structured representation of the steps involved in the study, a flowchart summarising the research methodology is presented below, as shown in Figure 1.

3.1 Hypothesis

The study assumes that social media has become a prominent source of information for students, not only in everyday and leisure contexts but also in academic settings [43]. It provides users with alternative learning environments. Students use these platforms to meet academic information needs, despite widely publicised issues such as rampant misinformation on social media [44]. Based on the above assumptions, the following hypotheses are formulated for verification in the study (as shown in Figure 2).

3.2 Sample

The population under study comprised students of Lovely Professional University, India. Data was collected from 121 students using stratified sampling, with the population being divided into two subgroups: national and international students. The sample consisted of 74 males and 47 females. There were 36 respondents in the 18-20 age group, 40 in the 21-23 age group, 20 in the 24-26 age group, and 25 in the 27 or older. In terms of academic discipline, there were 36 students from science, 14 from arts and humanities, 49 from engineering, 12 from commerce and 10 from social sciences. Samples were then chosen randomly from each subgroup, assuming a confidence level of 95%.

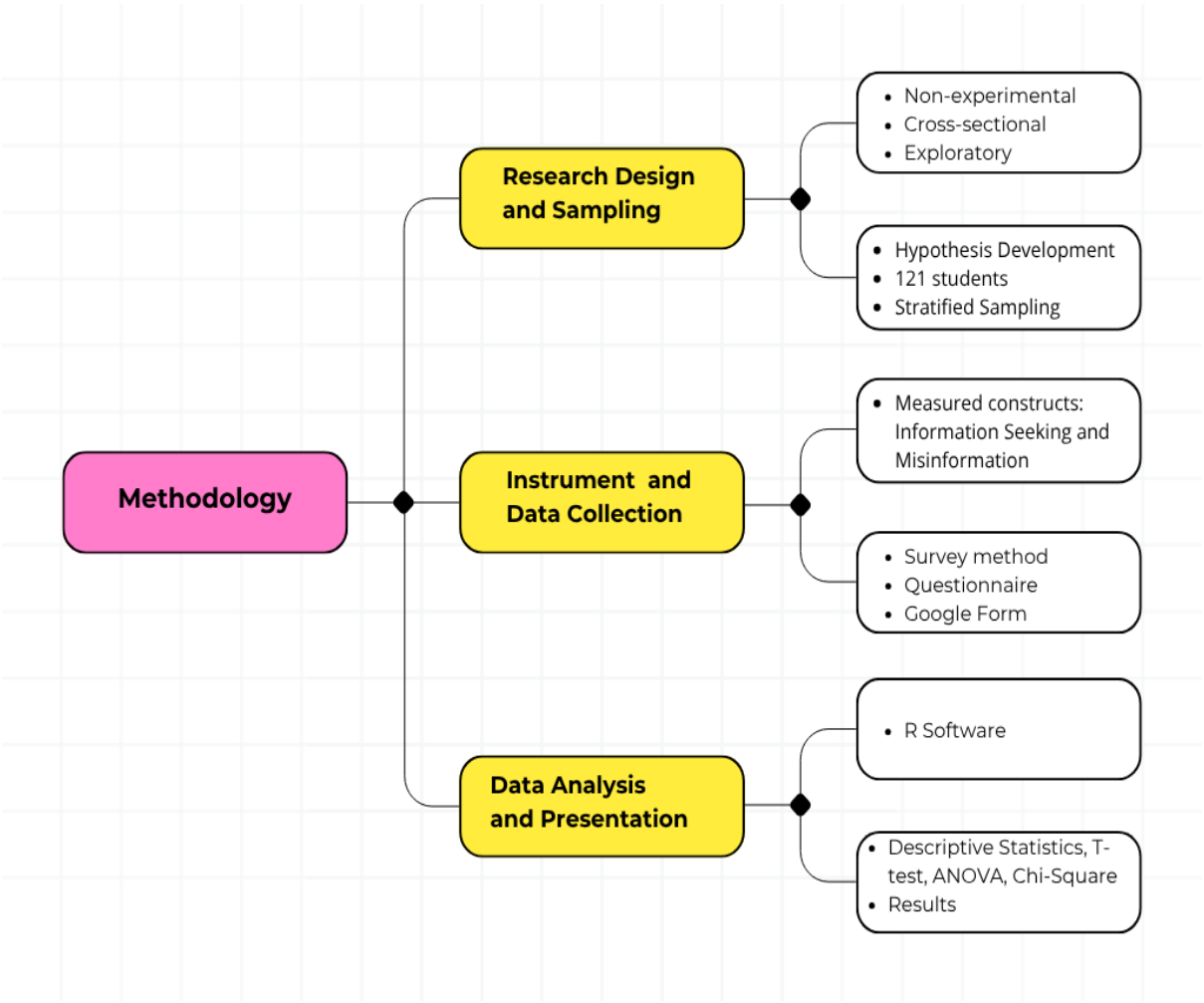

Fig. 1: Flowchart of Research Methodology

3.3 Instrument

A questionnaire, namely ”Information seeking on social media in the age of misinformation” was created with the intention of gathering data on how students were seeking information while filtering through the abundance of misinformation that can be found on social media. The questionnaire consisted of a total of 34 questions divided into three distinct blocks. Two key constructs, misinformation and information seeking, were intended to be elicited by the survey instrument.

The first section included the title and a brief introduction. The second section, namely demographics, contained questions regarding age, gender, educational qualification, discipline, and nationality. This was followed by the third section on social media. This section consisted of questions regarding platforms used to seek information, preferred platforms, type of content predominantly consumed, type of misinformation encountered, ways opted to evaluate the credibility of sources found online, handling misinformation, etc.

Constructs such as information seeking, misinformation, and combating misinformation were measured using a mix of question types, including multiple choice questions, Likert-scale-based questions and a few open-ended questions. These questions allowed respondents to freely share their thoughts. The researcher made use of the Likert scale with values ranging from 1-5 (1= very unlikely, 2= unlikely, 3= neutral, 4= likely, and 5=very likely) to collect responses.

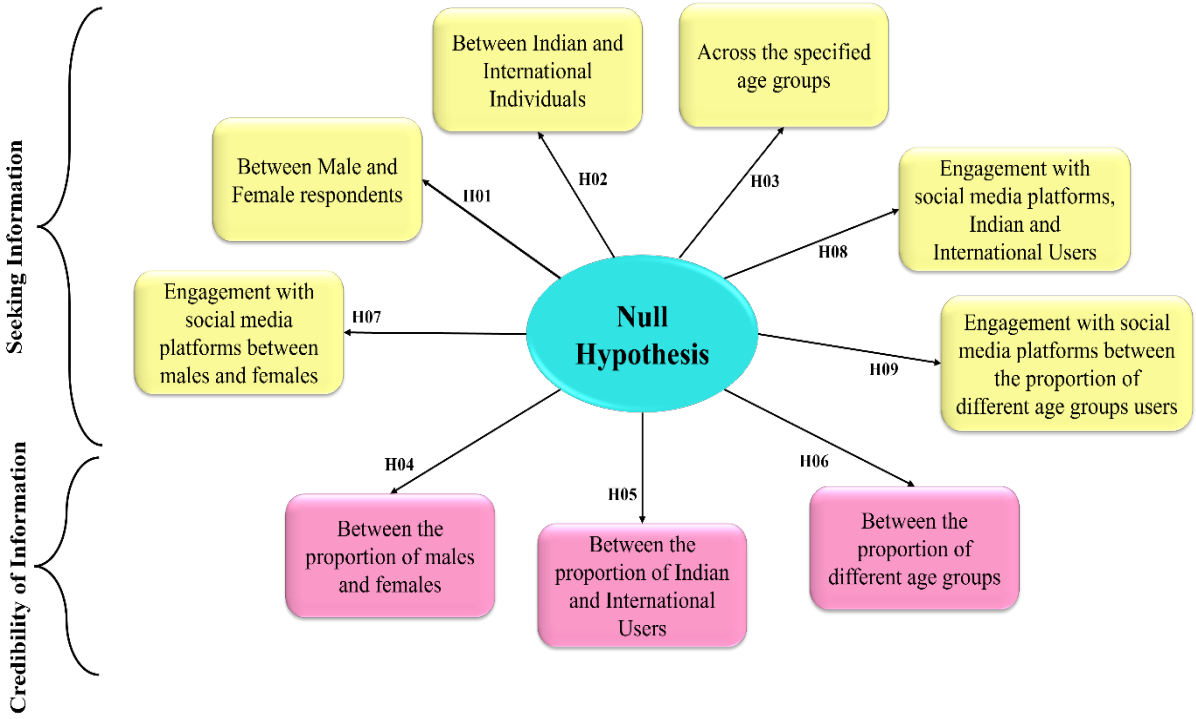

Fig. 2: Hypotheses

3.4 Procedure

Data collection was carried out in March 2024. Participants were requested to scan the QR code of the Google Form. Cognitive validity was ensured by having the researcher with the respondents at all times as they completed the survey to address participant queries.

Data analysis was carried out using the R software. Various descriptive statistical techniques were applied here. Descriptive statistics include range, variance, and standard deviation (variability) as well as mean, median, and mode (central tendency). These metrics help identify patterns and trends in data, which improves comprehension of its essential features. The normality of data was checked using the AD test. Tests like the T-test, ANOVA, and Chi-square test were also used in the analysis of data.

4 Analysis and interpretation of data

4.1 Descriptive Statistics

The descriptive statistics provide an insightful analysis of the ”Seeking Information” variable, as the table below illustrates:

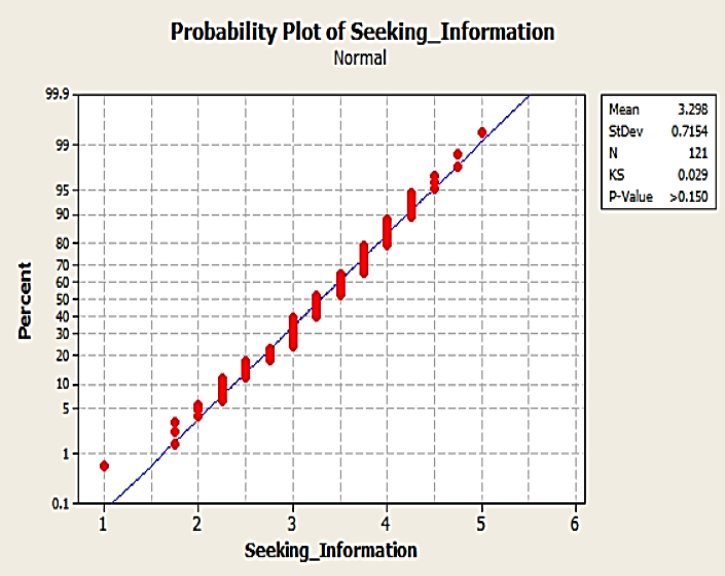

Fig. 3: Probability Plot for Seeking Information

Table 1: Descriptive Statistics

Statistic	Value
Mean	3.297520661
Standard Error	0.065035621
Median	3.25
Standard Deviation	0.715391829
Sample Variance	0.511785468
Kurtosis	0.221950773
Skewness	-0.344318988
Range	4

The mean, a measure of central tendency, indicates an average score of approximately 3.30, representing the central point around which data points cluster. The standard error, at 0.065, provides an estimate of the variability in the sample mean. The median, at 3.25, represents the middle value of the dataset and is less sensitive to extreme values than the mean. The mode, identified as 3, highlights the most frequently occurring value. The standard deviation, measuring the average deviation of individual data points from the mean, is 0.72, signifying a moderate level of variability in responses. The sample variance, at 0.51, offers insight into the spread of the data. Kurtosis, a measure of the distribution's shape, is 0.22, indicating a moderately peaked distribution. Skewness, at -0.34, suggests a slight leftward skew in the dataset. The range, spanning from 1 to 5, quantifies the spread between the minimum and maximum values.

According to these findings, the majority of respondents exhibit a modest degree of consistency in their attitudes toward information seeking; however, the minor negative skewness suggests that some respondents report slightly higher than average information-seeking engagement. Although students have a predisposition to seek information, the modest variability suggests that there are still individual variations, possibly as a result of academic background, curiosity levels, or access to digital resources. The use of parametric analysis in further tests is supported by the general pattern, which shows a balanced distribution.

4.2 Normality

The normality of the dataset was assessed using a probability (Q–Q) plot and the Kolmogorov–Smirnov (KS) test. The KS test was conducted under the null hypothesis (H_0) that the sample distribution does not significantly differ from a normal distribution.

As shown in Figure 3, the data points closely align with the diagonal reference line, indicating that the distribution approximates normality. The KS test produced a statistic of D = 0.029 and a p-value greater than 0.150. Since the p-value

exceeds the 0.05 significance level, we fail to reject the null hypothesis, confirming that the sample distribution does not significantly deviate from normality.

4.3 Analysis of Gender Disparities in Seeking Information

The analysis examines whether the responses from male and female respondents differ significantly in ”Seeking Information”. This investigation used the t-test, a statistical technique to evaluate whether the observed variations among groups may be attributed to chance or statistical significance. To understand potential differences in information-seeking behaviour, it is important to understand gender-based variances in information-seeking. For this purpose, the t-test is utilized.

Null Hypothesis (H_0): There is no significant difference in the means of ”Seeking Information” between male and female respondents.

Table 2: T-Test Result: Gender Disparities in Seeking Information

Variable	DF	t-value	p-value
Gender	96.286	0.45656	0.649

The computed t-value of 0.45656 with 96.286 degrees of freedom and a p-value of 0.649 indicates that there is no statistically significant difference between females and males in their mean scores for “Seeking Information.” The 95% confidence interval (-0.2057, 0.3287) includes zero, further supporting the conclusion that gender does not play a major role in this behavior.

This non-significant result suggests that both males and females may engage in information-seeking activities at comparable levels, possibly because access to information resources, exposure to digital platforms, or awareness of relevant topics has become more uniform across genders. Alternatively, it may indicate that individual factors such as motivation, education, or interest are stronger determinants of information-seeking behavior than gender.

From a practical perspective, these findings imply that interventions or awareness programs aimed at improving information-seeking behaviour may not need to be gender-specific, as both groups exhibit similar tendencies. Future research could explore other variables such as age, education level, or digital literacy to better understand what influences this behaviour.

4.4 Comparing Seeking Information Between Indian and International Students

The purpose of this analysis is to determine whether there are any differences between the information seeking of Indian and international students. Knowing these differences helps explain how cultural or geographic influences may affect information-seeking behaviours. For this purpose, the t-test is utilized.

Null Hypothesis (H_0): There is no significant difference in the means of ”Seeking Information” between Indian and International individuals.

Alternative Hypothesis (H_1): There is a significant difference in the means of ”Seeking Information” between Indian and International individuals.

Table 3: T-Test: Information Seeking by Indian vs International Students

Variable	DF	t-value	p-value
Nationality	98.433	-0.6321	0.5288

The t-value, which is -0.6321, quantifies the standard error difference between group means. The p-value with 98.433 degrees of freedom is calculated to be 0.5288. In the case where there is no difference in means, this p-value represents the probability of observing a t-value as extreme as the one that was computed. For the standard significance level of 0.05, the p-value of 0.5288, which indicates evidence against the null hypothesis, is not significant. The 95 percent confidence interval for the difference in means (-0.3458495, 0.1787442) includes zero, suggesting no significant difference between the means of the two groups. The sample estimates further reveal that the mean ”Seeking Information” for the Indian group is 3.266447, while for the international group, it is slightly higher at 3.35.

In conclusion, the null hypothesis cannot be rejected due to insufficient evidence, as indicated by the p-value of 0.5288 and the confidence interval that contains zero. It follows that there is no significant difference in the means of "Seeking Information" between Indian and International students based on the sample data.

This finding could indicate that both Indian and international respondents display equivalent levels of "Seeking Information" behavior, presumably as a result of increased globalisation and digital connectedness, which allow equal access to information sources across cultures. Individuals, regardless of origin, now rely significantly on online platforms and social networks to acquire knowledge. As a result, cultural differences in information-seeking tendencies may have faded, explaining why no significant difference emerged statistically.

4.4.1 Analyzing the Impact of Age Groups on Seeking Information

The main objective of this investigation is to determine whether the information-seeking behaviours of various age groups differ. Identifying possible age-related variations offers important insights into how people from different age groups interact with and seek out information. For this purpose, the ANOVA test is utilized.

Null Hypothesis (H_0): There is no significant difference in the means of "Seeking Information" across the specified age groups (18-20, 21-23, 24-26, 27 or above).

Alternative Hypothesis (H_1): There is a significant difference in the means of "Seeking Information" between at least two age groups.

Table 4: ANOVA: Impact of Age Groups on Seeking Information

Source	DF	Sum Sq.	Mean Sq.	F-value	p-value
Age-group	3	1.25	0.4168	0.811	0.49
Residuals	117	60.16	0.5142		

The ratio of variance across age groups to variance within age groups is measured by the F-statistic, which was computed to be 0.811. The corresponding p-value is 0.49, with 3 degrees of freedom for age groups and 117 degrees of freedom for residuals. This p-value is the probability of observing an F-value as extreme as the one that was calculated assuming that age group averages are identical. The null hypothesis cannot be strongly rejected at the standard significance level of 0.05 due to the p-value of 0.49.

There is not enough evidence to reject the null hypothesis, as indicated by the p-value of 0.49. Consequently, it can be inferred from the sample data that there is no significant difference in the means of "Seeking Information" between the specified age groups (18–20, 21–23, 24-26, and 27 or above). This implies that people from various age groups have identical information-seeking behaviours within the examined dataset.

This similarity in information-seeking behavior between age groups could be attributed to the ubiquitous availability of digital technology and social media, which have reduced generational knowledge acquisition disparities. Younger and older individuals are both exposed to online learning settings, digital resources, and social platforms that encourage active participation and self-directed discovery. Furthermore, in educational or professional situations where information literacy is emphasised, people of all ages may gain similar skills in searching for, analyzing, and using information. Thus, rather than age, digital exposure, education, and occupational obligations may have a greater impact on information-seeking tendencies.

5 The credibility of information sources on social media

5.1 Evaluating the Credibility of Information Sources on Social Media Based on Gender

Social media is emerging as a major information source for many people in the modern digital age. However, there is frequently doubt about the credibility of the information shared on these platforms. The purpose of the study was to compare the methods used by men and women in determining the credibility of information sources on social media. To do this, the chi-square test was applied.

Null Hypothesis (H_0): There is no significant difference between the proportion of males and females in the strategies they employ to evaluate the credibility of information sources on social media.

Alternative Hypothesis (H_1): There is a significant difference between the proportion of males and females in the strategies they employ to evaluate the credibility of information sources on social media.

Table 5: Chi-Square: Credibility of Information Sources on Social Media by Gender

Evaluation Strategy	DF	Chi-Square	p-value
Consider the source	1	2.6	0.1069
Read beyond the headline	1	3.3793	0.06602
Check author credentials	1	1.5283	0.2164
Fact-check	1	3.5714	0.05878
Personal judgment and critical thinking	1	2.5862	0.1078
Reverse image search	1	4.4815	0.03426
Check date and time	1	1.0889	0.2967
Ask the experts	1	0.57143	0.4497

Based on the chi-square test results, the strategies employed by men and women to evaluate the credibility of information sources on social media were analysed. The null hypothesis, which suggested no significant difference in these strategies based on gender, was not rejected as the p-value for most of the criteria was greater than 0.05. However, the "reverse image search" strategy was slightly below 0.05, indicating a potential difference between the two genders.

The findings suggest that men and women use similar credibility-checking procedures, which could be attributed to the ubiquitous availability of digital tools and online verification methods that cross gender boundaries. The minor difference in "reverse image search" may indicate that one gender, possibly men, is slightly more oriented toward technical verification methods, while women may depend more on social or contextual cues when appraising material. These minor variances could be influenced by various levels of digital confidence or exposure to fact-checking techniques.

5.2 Evaluating the Credibility of Information Sources on Social Media Based on Nationality

This investigation attempted to determine whether Indian and International users employ significantly different methods for evaluating credibility. The Chi-Square test was utilized for this objective.

Null Hypothesis (H_0): There is no significant difference between the proportion of Indian and international users in the strategies they employ to evaluate the credibility of information sources on social media.

Alternative Hypothesis (H_1): There is a significant difference between the proportion of Indian and international users in the strategies they employ to evaluate the credibility of information sources on social media.

Table 6: Chi-Square: Credibility of Information Sources on Social Media by Nationality

Evaluation Strategy	DF	Chi-Square	p-value
Consider the source	1	0.13846	0.7098
Read beyond the headline	1	1.7241	0.1892
Check author credentials	1	2.283	0.1308
Fact-check	1	9.9206	0.001634
Personal judgement and critical thinking	1	9.6667	0.0011876
Reverse image search	1	13.37	0.0002556
Check date and time	1	3.7556	0.5263
Ask the experts	1	5.1429	0.02334

The chi-square test results indicate a significant difference between Indian and international users in certain strategies employed to evaluate the credibility of information sources on social media. A significant difference was observed in strategies such as fact-checking, personal judgment, critical thinking, reverse image search, and asking an expert, as the p-value for all of these strategies was below 0.05. However, no significant differences were observed in strategies such as considering the source, reading beyond the headline, checking author credentials, and checking date and time.

These findings may reflect cultural disparities in media literacy and access to verification resources. International users may have had more exposure to formal digital literacy instruction and institutional fact-checking methods, resulting in increased use of systematic strategies such as reverse image searches and consulting experts. Indian users, on the other hand, may rely on intuitive or experience-based judgments due to variable levels of media education or trust in online information systems. Cultural views toward authority and information sharing rules may also influence these diverse patterns.

5.3 Evaluating the Credibility of Information Sources on Social Media Based on Age Group

This study examines various parameters used to assess the credibility of information across age groups on social media platforms. To achieve this, the Chi-Square test is used.

Null Hypothesis (H_0): There is no significant difference between the proportion of different age group users in the strategies they employ to evaluate the credibility of information sources on social media.

Alternative Hypothesis (H_1): There is a significant difference between the proportion of different age group users in the strategies they employ to evaluate the credibility of information sources on social media. The result of the chi-square test is shown in the table below.

Table 7: Chi-Square: Credibility of Information Sources on Social Media by Age Group

Evaluation Strategy	DF	Chi-Square	p-value
Consider the source	3	6.4462	0.09181
Read beyond the headline	3	1.8621	0.6015
Check author credentials	3	2.1698	0.5379
Fact-check	3	4.619	0.2019
Personal judgement and critical thinking	3	7.5747	0.05567
Reverse image search	3	13.444	0.003768
Check date and time	3	5.7556	0.1241
Ask the experts	3	3.7143	0.294

The results of the chi-square test indicate no significant difference in most of the strategies used to evaluate the credibility of information sources on social media among different age groups. The strategies include considering the source, reading beyond the headline, checking author credentials, fact-checking, personal judgment, and critical thinking, checking date and time, and asking the expert as they have a p-value greater than 0.05. Hence suggesting no difference between different age groups. On the other hand, reverse image search, which has a p-value less than 0.05, showed a significant difference across age groups.

The similarity of most techniques indicates that credibility awareness is spreading across age groups, presumably as a result of shared exposure to digital media education and online disinformation campaigns. However, younger users may be more likely to employ complex tactics such as reverse image search, owing to their greater technological expertise and comfort with online verification tools. Older users, who are more accustomed to closely assessing content, may depend on conventional indicators such as source or author reputation over technical verification approaches.

6 Engagement with Social Media Platforms for Information Seeking

6.1 Engagement with Social Media Platforms for Information Seeking Based on Gender

A Chi-square test was used to investigate the probability of both male and female users engaging with social media platforms in seeking information.

Null Hypothesis (H_0): There is no significant difference in the likelihood of engagement with social media platforms for information seeking between males and females.

Alternative Hypothesis (H_1): There is a significant difference in the likelihood of engagement with social media platforms for information seeking between males and females.

Table 8: Chi-Square: Social Media Platforms for Information Seeking by Gender

Engagement Likelihood	DF	Chi-Square	p-value
Very unlikely	1	3.5714	0.05878
Unlikely	1	0.72727	0.3938
Neutral	1	0.27273	0.6015
Likely	1	2.6129	0.106
Very likely	1	0.42105	0.5164

The chi-square test results indicate that there are no significant gender differences in engagement with social media platforms for information seeking, as all p-values are greater than 0.05. This suggests that both male and female students are equally likely to use these platforms to seek information. This finding highlights how social media has become a gender-neutral space for academic and informational engagement. The equal participation of male and female students may reflect the widespread integration of digital tools in higher education, where access and digital literacy have become more evenly distributed across genders. This parity could indicate the diminishing influence of traditional gender roles in online information-seeking behavior.

6.2 Engagement with Social Media Platforms for Information Seeking Based on Nationality

To investigate the probability of Indian and international users engaging with social media platforms to seek information, a chi-square test was used.

Null Hypothesis (H_0): There is no significant difference in the likelihood of engagement with social media platforms for information seeking between Indian and international users.

Table 9: Chi-Square: Social Media Platforms for Information Seeking by Nationality

Engagement Likelihood	DF	Chi-Square	p-value
Very unlikely	1	7	0.008151
Unlikely	1	1.333	0.2482
Neutral	1	2.4545	0.1172
Likely	1	0.80645	0.3692
Very likely	1	1.6842	0.1944

With a notable difference in the lowest likelihood category, the other categories showed no significant difference between Indian and international students when it comes to engaging with social media platforms for seeking information, as all of them had a p-value greater than 0.05.

This suggests that nationality does not play a major role in determining how students use social media for information seeking. The similarity may stem from shared exposure to global digital platforms like YouTube, Instagram, and LinkedIn, which transcend national boundaries. Increasing cultural convergence through online education and international communication might have reduced distinctions in digital engagement between Indian and international students.

6.3 Engagement with Social Media Platforms for Information Seeking Based on Age Group

To investigate the probability of users from different age groups engaging with social media platforms in seeking information, a chi-square test was used.

Null Hypothesis (H_0): There is no significant difference in the likelihood of engagement with social media platforms for information seeking between the proportion of different age groups.

Alternative Hypothesis (H_1): There is a significant difference in the likelihood of engagement with social media platforms for information seeking between the proportion of different age groups.

Table 10: Chi-Square: Social Media Platforms for Information Seeking by Age Group

Engagement Likelihood	DF	Chi-Square	p-value
Very unlikely	3	5	0.1718
Unlikely	3	2	0.5724
Neutral	3	5.4242	0.1432
Likely	3	4.7419	0.1917
Very likely	3	3.0526	0.3836

The chi-square test results show no significant differences in engagement with social media platforms for information seeking across age groups, as all p-values are greater than 0.05. This indicates that students of different age groups display similar patterns of engagement when using social media to seek information.

This finding implies that social media as a source of information has achieved intergenerational acceptance among students. With the increasing use of online learning environments, even older students have adapted to social media platforms as essential tools for academic interaction and resource discovery. This uniform engagement across ages suggests a narrowing of the digital divide in the educational contexts.

6.4 Reasons behind using social media

To determine the most significant reasons for students' use of social media, the mean of all relevant parameters was calculated.

Table 11: Mean Values for Reasons for Social Media Use

Reason	Mean
Information seeking	3.6694
Entertainment	3.5868
Information sharing	3.1074
Self-expression and creativity	3.0992
Social interaction	2.8585

The result is visualised using the bar plot as shown in Figure 4.

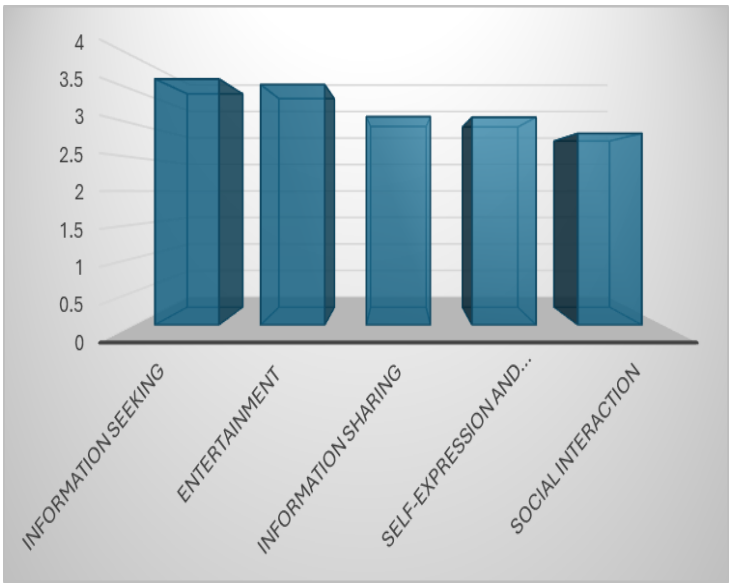

Fig. 4: Mean Values for Reasons for Social Media Use

The purpose of the investigation was to determine the main reason for social media use among all the students. By calculating the mean, it was determined that information seeking was the primary reason for using social media, with entertainment close behind. Surprisingly, social interaction was found to be the least significant motivation for using social media. Hence, it can be concluded that students prioritized obtaining information and entertainment over socializing on social media platforms. This reflects a shift towards the utilization of social media as knowledge repositories rather than just mere tools for communication.

The prevalence of information-seeking and entertainment as main motivators reflects a shift in students' perceptions of social media, from solely social interaction spaces to multipurpose knowledge ecosystems. This transition is consistent with global trends where students are increasingly using sites such as YouTube and LinkedIn for learning and

self-development. The low emphasis on social interaction shows that students prefer self-directed exploration above communal involvement, reflecting changing patterns of digital autonomy in academic settings.

7. Results

Since social media has become ingrained in our daily lives, there is a need to understand the kind of information students seek online as well as the issues they face while navigating through enormous amounts of information that they come across every day. The findings of the study showed information seeking as a primary reason for students to use social media. Subsequently, the most popular platforms for information-seeking were determined to be YouTube (73.8%), Instagram (54.9%), WhatsApp (48.4%), and X (28.7%). Regarding the kind of content being consumed, educational content was the most popular choice, chosen by 73.8% of students. Students also preferred consuming news and current events as well as entertainment. One intriguing finding was regarding gender differences in information-seeking. Contrary to expectations, there were no significant variations between male and female respondents. In a similar manner, no notable distinctions were found in the information-seeking tendencies between Indian and international students. However, a slight variation was observed in their usage of social media platforms for seeking information. Despite the common belief that age influences technological adoption and online behaviour, this study didn't reveal any significant differences among age groups in how they seek information from social media platforms. There appears to be a level of uniformity in this regard across different age brackets.

Combating misinformation has been one of the most difficult tasks of the modern era. The most prevalent types of misinformation that students reported seeing were fake news (74.6%), misleading content (62.3%), political misinformation (59%) and conspiracy theories (43.4%). Evaluating the credibility of information sources emerged as a crucial aspect in combating misinformation on social media. Surprisingly, it was discovered that both genders and different age groups employed similar strategies to evaluate the trustworthiness of information sources. However, these strategies varied across nationalities. Notably, there were significant differences in the parameters used by individuals to assess the credibility of information, depending on their nationality, such as fact-checking, personal judgment, critical thinking, asking the experts, etc. When it comes to using "Reverse image search" to evaluate different online sources students come across on social media platforms, a significant difference was seen across all age groups, genders, and nationalities.

When asked how they would like to combat false information on social media, students suggested fact-checking, gatekeeping, using Artificial intelligence, etc. One user suggested, and we quote, "Social media platforms can combat misinformation by leveraging AI for fact-checking and bot detection. They can prioritise verified sources, collaborate with fact-checkers, and provide transparent labels for misleading content. Also, digital literacy should be promoted among the users." Another user suggested, "Promote education, improve algorithms, implement fact-checking, enhance transparency, encourage community reporting, foster collaboration, enact regulations and promote credible sources."

8. Discussion

The study provided several interesting insights related to the information seeking of students while being surrounded by a flood of misinformation. The study found information seeking as a primary reason for students to use social media. This might be because they are accustomed to the digital world and therefore, use social media as their primary source of information [9][45]. Research conducted by Chauhan et al. revealed that people preferred social media platforms to seek information over traditional sources of information [46]. Subsequently, YouTube (73.8%) was found to be the most popular platform used for information-seeking by students, followed by Instagram (54.9%) and WhatsApp (48.4%). The reason behind YouTube being the most popular platform, as revealed by Lim et al., is that people perceive it as an easily accessible and reliable place for learning about diverse topics ranging from academic information to receiving advice [47].

The data from our study also demonstrated that educational content was the most consumed content by students, with 73.8% reporting it as their primary choice. Research by Ohara also revealed that social media served as an important tool for facilitating the consumption of academic information, which is consistent with our study [48]. This underscores the importance of these platforms extending beyond just communication and entertainment, as they play a crucial role in providing access to diverse information.

Our study did not find any difference in information seeking between male and female respondents. Research conducted by Yang considered the availability of excessive amounts of information online to be the reason behind this insufficient variation [26]. This challenges common stereotypes and highlights the universal nature of information-seeking abilities, which are not bound by gender. Similarly, nationality did not seem to affect the overall information-seeking behaviour of the students. Nonetheless, there was a marginal distinction in their usage of social

media for seeking information. However, this difference was not seen across both genders and age groups. This might be because this generation is skilled in using social media platforms as well as in finding information on social media, as pointed out by Pyae & Nikou [49].

In our study, respondents considered fake news as the most commonly encountered form of misinformation. This was followed by misleading content, political misinformation and conspiracy theories. These results are consistent with research done by Rhodes, who also considered social media as the primary gateway through which individuals are exposed to fake news [50]. Interestingly, the data extracted on the question regarding motivations behind sharing misinformation on social media, misinforming others (36.9%) was chosen by most of the students and was followed by entertainment (36.1%). This is in contrast with the research by Agarwal et al., who considered expanding the audience and having a false feeling of accomplishment as the major reasons behind misinformation sharing [16].

When asked about how they tackle misinformation, the majority of respondents reported ignoring it and moving on. This aligns with the study conducted by Stewart et al., which also found that users did not prefer to take any action when coming across misinformation [51]. Furthermore, there was not much difference in the strategies that the respondents used to check the authenticity of the information they found online. This behaviour was found to be the same across all age groups and genders. However, the strategies differed when it came to national and international students. The difference was mainly seen in strategies like fact-checking, personal judgment and critical thinking. Overall, fact-checking, gatekeeping the information that goes on social media, and using artificial intelligence were some of the ways suggested by the students to tackle misinformation. In much the same way, Li and Chang as well as Adjin-Tettey have suggested using fact-checking standards, promoting information literacy and educating the public to create awareness regarding misinformation [52][53].

Conclusion

To conclude, the study found that social media serves as a substantial source of information. However, the reliability of information transmitted through it remains a problem. The study allows for the consideration of the preference for information seeking on social media by offering possible solutions and policy implementations for the future based on the results.

Given that misinformation has become a global issue in the present world, there is a need for a revised information-seeking experience that takes into account the misinformation aspect as well. Implementing measures like enhancing digital literacy, providing fact-checking tools, fostering critical thinking, and promoting transparency in content dissemination are crucial. Collaboration among social media platforms, educators, and policymakers is essential for developing effective strategies. Fostering a culture of responsible sharing and promoting trustworthy sources can create a more reliable information environment on social media. This study's limitation lies in its sample size, taken from a single university, which may affect the generalizability of the findings. Future research should include a larger and more diverse sample to validate these results and explore additional variables that influence the information-seeking behaviours of users on social media platforms.

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