Differences in RedNote Information Seeking Between Problematic and Regular Social Media Users

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People continuously seek information in the changing world. This behaviour, and the motives underlies it, are considered closely related to mental health in some recent studies. Research suggests that three primary motives: instrumental utility (how information aids actions), hedonic utility (its impact on emotions), and cognitive utility (its relevance to frequently contemplated concepts) integrate to determine the value of information, influencing whether people pursue or avoid it. Among the three motives, a stronger focus on cognitive utility was found associated with better mental health (Kelly & Sharot, 2021). Similarly, previous research has established a connection between information-seeking behaviors and various mental health symptoms or disorders, such as anxiety (Charpentier et al., 2022), social anxiety disorder (Aderka et al., 2013), and depression (Hildebrand-Saints & Weary, 1989). These findings suggested that information-seeking patterns may offer valuable insights into mental health. Therefore, further exploration and research into information-seeking behaviors is warranted.

Information seeking extends naturally to the online environment - the development of the internet, social media, and algorithms means people are now exposed to vast amounts of information in social media platforms and seek it in highly individualized ways. Platforms like Facebook enable users to search for, share, and engage with content driven by motives such as curiosity, social connection, and practical needs (Asghar, 2015). However, excessive use of social media platforms can lead to Problematic Social Media Use (PSMU), which is characterized by excessive and uncontrolled engagement with social media platforms, resulting in harmful effects on users' functioning and overall well-being (Kuss & Griffiths, 2017), showing strong associations with depression, anxiety, stress, insomnia, and attention issues (Cui et al., 2023; Shannon et al., 2022; Shensa et al., 2017). Nevertheless, the link between information seeking and PSMU remains unknown. We assume that exploring

information-seeking might offer valuable insights into the mechanisms of problematic social media use (PSMU) and may reveal strategies to mitigate its adverse effects on mental health.

In China, including Hong Kong, Xiaohongshu (RedNote) has surged in popularity, reaching 235 million monthly active users in 2025 with a 56% monthly usage rate, primarily among young, post-1990s females seeking lifestyle and shopping inspiration (Statista., 2025). This platform's emphasis on authentic, user-generated content mirrors broader trends in digital information consumption, yet its unique features warrant tailored adaptations of existing frameworks. The current study advances this by adapting Asghar's (2015) Facebook information seeking scale to capture RedNote-specific behaviors, and Kelly and Sharot's (2021) general information seeking motives scale to fit the platform's context. This pilot study addresses two research questions: Do problematic and regular social media users exhibit differences in information-seeking behavior? Do problematic and regular social media users differ in information-seeking motivation?

Method

Participants

Participants were recruited through an online questionnaire disseminated on the RedNote platform. The survey was hosted on Qualtrics and designed to take approximately 20 minutes to complete. Participants were required to be adults over the age of 18. Key eligibility criteria included the ability to read either Simplified/Traditional Chinese or English and being a frequent user of the XiaoHongShu/RedNote social media platform. To ensure the integrity of the study, individuals were excluded if they had a history of mental illness, severe depressive symptoms, neurological disorders (such as a severe brain injury), or severe physical illnesses. Additionally, participants could not be currently under the influence of drugs, alcohol, or nicotine. Prior to participation, respondents were presented with an

informed consent form outlining the study's purpose, procedures, potential risks, and benefits. Only those who provided electronic consent by digitally signing the form proceeded to the questionnaire.

A total of 234 participants completed the survey. Data quality checks were implemented to ensure validity. First, two attention-check items were embedded (e.g., "Please select option 3 for this item"), requiring participants to select a specific response to demonstrate attentiveness. Three participants who failed these checks were excluded. Next, completion times were examined for outliers; durations exceeding three standard deviations from the mean (indicating either rushed or excessively prolonged responses) led to the exclusion of additional cases. Participants who did not provide consent or had substantial missing data on key variables required for analysis were also removed. After these exclusions, the dataset comprised 168 valid responses.

For subsequent statistical analyses, participants were categorized based on their scores on the Bergen Social Media Addiction Scale (BSMAS). Those scoring above 23 were classified as problematic social media users (PSMU), while scores below 19 indicated regular social media users (RSMU). Participants with intermediate scores (19–23) were excluded resulting in a final analytic sample of 114.

Participants received a compensation of 15 HKD after completion. Ethical approval for the study was obtained from the Human Research Ethics Committee at the University of Hong Kong.

Measures

Self-report measures were employed to assess participants' information-seeking behaviors, motives, problematic social media use, passive and active social media engagement, and overall social media usage patterns on RedNote. All scales were adapted

where necessary to fit the context of RedNote. Prior to data collection, all scales was translated to Chinese using a standardized back translation process (Beaton et al., 2000). Responses were collected using Likert-type scales where applicable, and data were analyzed for internal consistency.

Information Seeking in RedNote Scale Information-seeking behaviors on RedNote were measured using an adapted version of the Information Seeking in Facebook Scale (ISFS; Asghar, 2015). The scale was tailored to RedNote's features, resulting in a 21-item instrument assessing various aspects of information-seeking. It comprises five subscales, each capturing distinct dimensions of information-seeking behavior: Social Searching, Hedonic Proclivity, Social Browsing, Consumer Trends Information, and General Erudition. Items were rated on a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). In the original validation, the scale demonstrated good reliability (Cronbach's $\alpha = .89$ overall; Asghar, 2015), though adapted reliability was assessed in the current study ($\alpha = 0.769$). However, all five subscales—Social Searching ($\alpha = 0.524$), Hedonic Proclivity ($\alpha = 0.485$), Social Browsing ($\alpha = 0.444$), Consumer Trends Information ($\alpha = 0.395$), and General Erudition ($\alpha = 0.504$)—showed low reliability.

Information-Seeking Motives in RedNote Motives for information-seeking on RedNote were evaluated using an adapted scale from Kelly and Sharot (2021), which examines instrumental, hedonic, and cognitive utilities in information consumption on RedNote. The adapted instrument consists of three primary subscales with a total of 10 items. The Instrumental Utility subscale (3 items) focuses on practical benefits, including Perceived Usefulness (e.g., how helpful the information is for tasks), Work/Study Problem-Solving (e.g., aiding academic or professional challenges), and Life Problem-Solving (e.g., addressing everyday issues). The Hedonic Utility subscale (4 items) assesses emotional impacts, covering General Feeling (e.g., overall mood enhancement), Perceived Loss (Hypothetical)

(e.g., aversion to missing out), Impact on Negative Emotions (e.g., reducing anxiety), and Impact on Positive Emotions (e.g., boosting happiness). The Cognitive Utility subscale (3 items) evaluates knowledge-building aspects, including Topic Coverage (e.g., depth of content on user-relevant issues), Understanding (e.g., improving comprehension of events), and Prediction (e.g., enhancing foresight on future developments). Items were rated on a 7-point Likert. Internal consistency was assessed via Cronbach's alpha. Reliability was acceptable for the instrumental ($\alpha = .691$) and total motivation scales ($\alpha = .691$), moderate for the cognitive scale ($\alpha = .663$), and low for the hedonic scale ($\alpha = .181$).

Bergen Social Media Addiction Scale (BSMAS) Problematic use of social media was assessed with the Bergen Social Media Addiction Scale (Andreassen et al., 2017), a 6-item measure capturing addiction-like symptoms (e.g., salience, mood modification, tolerance). Participants rated each item on a 5-point Likert scale from 1 (Very rarely) to 5 (Very often), with total scores summed to indicate risk level. The BSMAS has demonstrated excellent reliability in prior studies ($\alpha = .88$) and is widely used for social media contexts.

Passive and Active Social Media Use Passive and active engagement on social media were measured using an 11-item scale adapted from Chen et al. (2022).

Social Media Use Scale General social media usage on RedNote was captured via a custom 14-item scale assessing quantitative metrics. Items included: average weekday time spent, average weekend time spent, average daily screen time this week, overall frequency of use, and account-specific details such as number of followers, accounts followed, number of notes posted, likes gained, favorites gained on the primary account and across all accounts. Responses were self-reported numerical estimates or selections, providing a comprehensive profile of platform engagement.

Statistical Analysis

All statistical analyses were conducted using R software. The independent variable was Group, dichotomized as Problematic Social Media Users (BSMAS score > 23) and Regular Social Media Users (BSMAS score < 19). Between-group comparisons were performed on key dependent variables, including BSMAS scores, individual items from the Social Media Use Scale (SMU), total scores for Passive and Active Social Media Use, and subscale scores for Information-Seeking Motives in RedNote (Instrumental Utility, Hedonic Utility, and Cognitive Utility).

Data normality was assessed. If normality was met ($p > 0.05$), independent samples t-tests were employed for group comparisons; otherwise, non-parametric Mann-Whitney U tests were applied. The significance threshold was set at $p < 0.05$ (two-tailed).

To examine the multivariate influence of Group on the five subscales of the Information Seeking in RedNote Scale (Social Searching, Hedonic Proclivity, Social Browsing, Consumer Trends Information, and General Erudition), a one-way multivariate analysis of variance (MANOVA) was conducted, with follow-up univariate ANOVAs if the overall MANOVA was significant. Pillai's trace was used as the test statistic due to its robustness with smaller or unequal sample sizes.

Results

Demographic and behavioral results

As expected, the Problematic social media user (PSMU) group showed a significantly higher problematic social media use severity on the BSMAS relative to the Regular media user user (RSMU) group ($p < .001$). Significant differences were found in the scale and engagement of their social media presence. The PSMU group had a significantly greater number of accounts followed on their primary account ($p = .0048$), posted significantly more

notes on their primary account ($p = .03$), and gained significantly more favorites on their primary account ($p = .02$).This pattern of larger-scale and more active use extended to their activity across all accounts. The PSMU group had significantly more total followers ($p = .01$), followed significantly more accounts ($p = .0024$), posted significantly more notes ($p = .03$), and gained significantly more likes ($p = .02$) and favorites ($p = .01$). Also, both composite measures of use were significantly elevated in the PSMU group, with significantly higher scores for both passive use ($p = .01$) and active use ($p < .001$).

However, contrary to expectations, the PSMU group did *not* differ significantly from the RU group in their average weekday usage time ($p = .09$), weekend usage time ($p = .18$), or general frequency of use ($p = .89$).

(Table 1).

Table 1. **BSMAS and RedNote use pattern**

	Mean (± SD)		*t/W*	*p*	Effect size
	PSMU (N =16)	RSMU (N =98)			
BSMAS total score	25.31 (1.62)	15.15 (2.65)	**1568.00**	**<0.001**	**0.60**
Average weekday usage time	3.13 (1.42)	2.68 (2.41)	986.50	0.091	0.16
Average weekend usage time	4.47 (1.97)	3.70 (1.73)	946.50	0.182	0.12
Frequency	3.88 (1.20)	3.80 (1.27)	801.00	0.889	0.01
Number of followers of the primary account	254.25 (217.98)	869.18 (5189.57)	**1048.00**	**0.032**	**0.20**
Number of accounts followed of the primary account	529.50 (936.05)	212.05 (255.61)	**1130.00**	**0.005**	**0.26**
Number of notes posted of the primary account	292.63 (550.83)	38.57 (55.08)	**1045.50**	**0.033**	**0.20**
Number of likes gained of the Primary account	2482.13 (4237.51)	1032.31 (2452.27)	1007.00	0.069	0.17

Number of favs gained of the Primary account	495.38 (786.36)	197.10 (621.13)	**1074.50**	**0.018**	**0.22**
Number of Followers of all accounts	603.00 (917.96)	504.02 (1612.39)	**1086.00**	**0.014**	**0.23**
Number of Accounts Followed of all accounts	1107.81 (2147.67)	244.06 (290.72)	**1156.00**	**0.002**	**0.28**
Number of notes posted of all accounts	682.13 (1215.51)	10770.12 (38867.01)	**1047.50**	**0.032**	**0.20**
Number of likes gained of all accounts	3336.00 (5914.78)	1169.10 (3207.52)	**1062.00**	**0.024**	**0.21**
Number of favs gained of all accounts	932.31 (1691.62)	169.97 (441.59)	**1123.00**	**0.006**	**0.26**
Passive Use Score	5.16 (0.97)	4.65 (0.68)	**1109.50**	**0.008**	**0.25**
Active Use Score	5.33 (0.85)	4.19 (1.06)	**4.78**	**<0.001**	**1.10**

Differences in Information-Seeking Behavior

To examine the multivariate influence of user group (Problematic vs. Regular Users) on the five subscales of the Information Seeking in RedNote Scale (Social Searching, Hedonic Proclivity, Social Browsing, Consumer Trends Information, and General Erudition), a one-way multivariate analysis of variance (MANOVA) was conducted. The overall MANOVA was significant, Pillai's Trace = 0.18, $F(5, 108) = 4.84$, $p < .001$, indicating a significant multivariate effect of group on the combined dependent variables.

Follow-up univariate analyses of variance (ANOVAs) were conducted to examine the group differences on each subscale. The results indicated that Problematic Users scored significantly higher than Regular Users on Social Searching, $F(1, 112) = 24.42$, $p < .001$, $\eta^2 = .18$; Hedonic Proclivity, $F(1, 112) = 12.32$, $p < .001$, $\eta^2 = .10$; and General Erudition, $F(1, 112) = 8.57$, $p = .004$, $\eta^2 = .07$. No significant differences were found between groups on Social Browsing, $F(1, 112) = 1.54$, $p = .217$, $\eta^2 = .01$, or Consumer Trends Information, $F(1, 112) = 1.43$, $p = .234$, $\eta^2 = .01$.

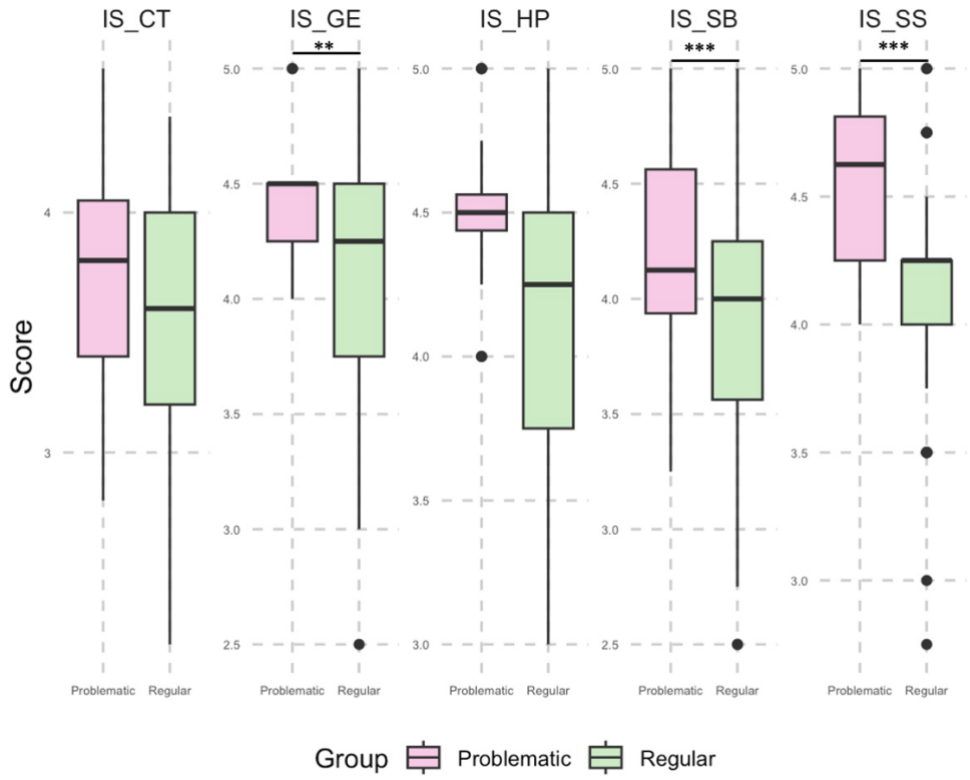

Figure 1. MANOVA follow-up analysis of the Information Seeking in XiaoHongShu Scale. CT = Consumer Trends Information; GE = General Erudition; HP = Hedonic Proclivity; SB = Social Browsing; SS = Social Searching.

Differences in Information-Seeking Motivations

Analyses of motivational factors showed that Problematic Users reported significantly higher instrumental motivation (Problematic Mdn = 6.17, Regular Mdn = 5.33), $U = 1185.00$, $p = .001$, $r = .31$, and cognitive motivation (Problematic Mdn = 6.00, Regular Mdn = 5.00), $U = 1329.00$, $p < .001$, $r = .42$. However, an independent samples t-test found no significant difference between groups in hedonic motivation (Problematic: M = 5.45, SD = 0.85; Regular: M = 5.11, SD = 0.80), $t = 1.49$, $p = .153$, $d = 0.42$.

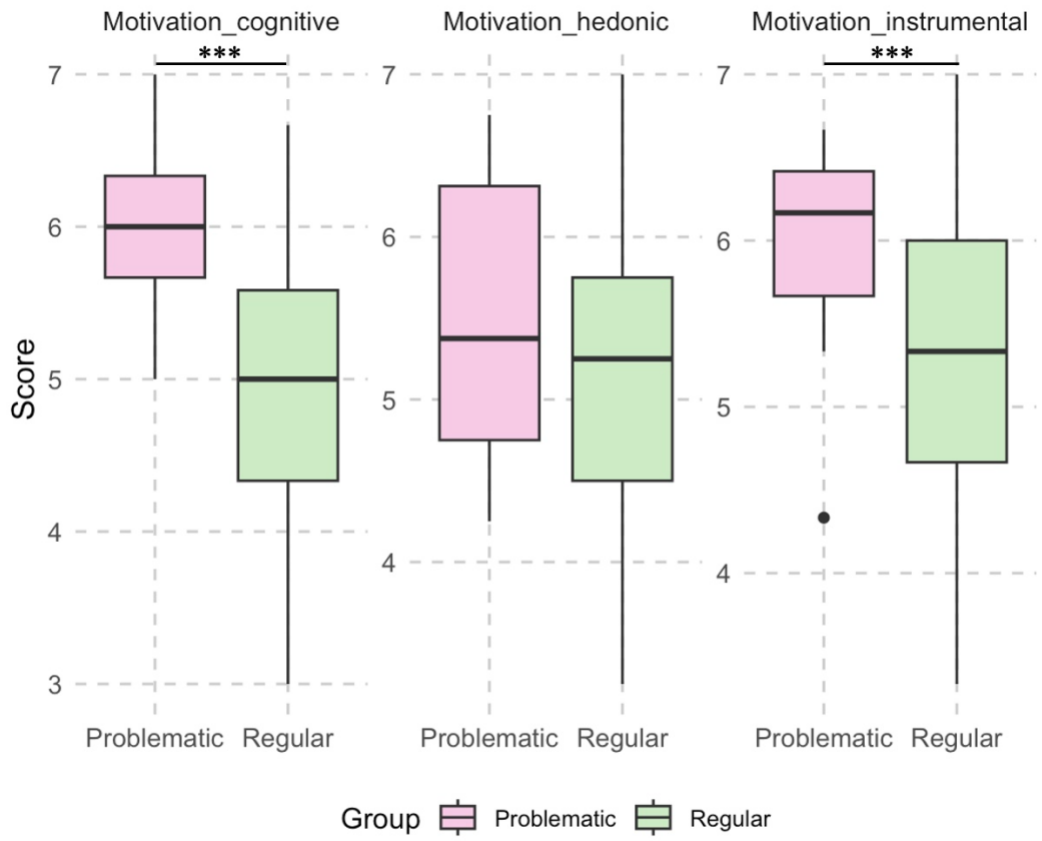

Figure 2. t-test or the Mann-Whitney U test results of the Information Seeking Motivation Scales.

Discussion

The findings of this pilot study illuminate notable differences in information-seeking behaviors and motivations on RedNote (Xiaohongshu) between problematic and regular social media users, aligning with the research's aim to elucidate mechanisms underlying problematic social media use through an information-seeking lens. Problematic users exhibited significantly higher engagement in specific information-seeking behaviors, including social searching, hedonic proclivity, and general erudition, compared to regular users. However, no significant differences emerged in social browsing or consumer trends

information seeking. Regarding motivations, problematic users reported markedly higher instrumental and cognitive motives but not hedonic motives. These patterns suggest that problematic use may manifest through intensified, targeted information pursuits that potentially reinforce addictive cycles, such as seeking social validation or knowledge to alleviate underlying distress, rather than passive browsing. This contributes to broader understandings of how information-seeking dynamics on platforms like RedNote could perpetuate problematic engagement, extending prior frameworks from platforms like Facebook.

This study found an increase among PSMU in information seeking in RedNote, especially in social searching, hedonic proclivity, and general erudition. These findings are consistent with previous studies focusing on information seeking behaviour and mental health (Aderka et al., 2013; Charpentier et al., 2022; Hildebrand-Saints & Weary, 1989), while contradict to previous research suggests that using social media for information-seeking purposes is not linked to negative mental health outcomes or behavioral issues (Stockdale & Coyne, 2020). Different from other platforms that focusing on connections and updates, RedNote is a niche platform emphasizing authentic, user-generated content on lifestyle, beauty, and shopping, therefore may foster more intentional, inspiration-seeking behaviors among its predominantly young, urban Chinese users (73% seeking inspiration, 90% engaging in searches). This character might strengthen the relationship between information seeking and problematic social media use. The observed group differences—higher social searching, hedonic proclivity, and general erudition in problematic users—could stem from motives like escapism, social comparison, or reassurance-seeking, which are amplified in problematic use. For instance, problematic users may compulsively search for social cues or entertaining content to cope with anxiety or loneliness, behaviors linked to poorer mental health outcomes in prior studies on social media information seeking. Conversely, the lack of

differences in social browsing and consumer trends might reflect RedNote's algorithmic personalization, which encourages active rather than passive engagement, potentially mitigating group disparities in these areas. However, the interpretation of these behavioral differences need cautious, as the adapted Information Seeking in RedNote Scale has suboptimal internal consistency, with lower Cronbach's alphas across subscales, potentially due to inherent differences between RedNote and Facebook.

Turning to motivations, this study pioneers the adaptation of Kelly and Sharot's (2021) three-utility model—instrumental (action-oriented), hedonic (affect-driven), and cognitive (thought-relevance)—to measure information-seeking motives specifically on RedNote, revealing higher instrumental and cognitive motives among problematic users. This adaptation marks a novel application in social media contexts, where motives like practical utility (e.g., seeking actionable advice on lifestyle) and cognitive relevance (e.g., pursuing information tied to frequent preoccupations) may drive excessive use. Possible explanations include problematic users leveraging instrumental motives for perceived problem-solving, such as seeking health or relationship tips to address underlying issues, while elevated cognitive motives might reflect rumination or obsessive thinking patterns that fuel addiction cycles. Noticeably, these results is inconsistent with Kelly and Sharot (2021) previous finding that greater weight on cognitive utility correlates with fewer psychopathology symptoms in self-traits domain, suggesting it as a protective factor in general contexts. However, in this social media-specific setting, higher cognitive motivation among problematic users may indicate a maladaptive twist, where frequent thoughts about platform content (e.g., beauty standards or trends) exacerbate rather than alleviate symptoms like depression or anxiety, potentially due to the addictive nature of endless scrolling and comparison. The absence of hedonic motive differences could imply that pleasure-seeking is a universal driver on

RedNote, not uniquely tied to problematic patterns, though further research is needed to disentangle these dynamics.

Despite these insights, several limitations temper the findings. As a pilot study, the sample size was small, and demographic data (e.g., age, gender, education) were not collected, limiting generalizability and the ability to control for confounders like gender differences in information-seeking styles. The imbalance in group sizes—fewer problematic users—may have influenced statistical power, though mitigated by employing non-parametric Mann-Whitney U tests following normality checks. Additionally, RedNote's cultural specificity, serving primarily Chinese (including Hong Kong) users with a focus on niche, authentic content, restricts applicability to global platforms; scant prior research on RedNote compared to Facebook hindered robust adaptations, contributing to scale reliability issues. Future studies should incorporate larger, demographically diverse samples, refine scale adaptations through qualitative validation (e.g., focus groups on RedNote-specific behaviors), and explore longitudinal designs to assess causality between information seeking and problematic use.

In conclusion, this study demonstrates distinct differences in information-seeking behaviors and motivations on RedNote between problematic and regular users, particularly in targeted social and knowledge pursuits driven by instrumental and cognitive motives. These findings advance the adaptation of established frameworks to culturally specific platforms, offering preliminary evidence that information-seeking mechanisms may underpin problematic social media use.

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