

# Can We Chat Privately?: How Information Seeking Anxiety Increases Privacy Concerns With Live Chat.

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# Introduction

The aphorism “those who need help the most are the least likely to seek it” was put to the test and corroborated by Karabenick and Knapp’s 1988 study of help-seeking behavior compared to academic performance, which found that students who struggled the most academically were less likely to seek help compared to students who struggled only moderately.<sup>1</sup> They hypothesized that factors such as “embarrassment” and “lower-self-worth” might explain the phenomenon. In another study published that same year, they asked students to choose between seeking interpersonal help or automated help via a computer and found that “When failure is likely, the potential for privacy in help-seeking provided by a computer can increase help-seeking.”<sup>2</sup> They suggested that the affected students preferred the more private, computer-mediated option to avoid interpersonal embarrassment.<sup>3</sup>

They suggested further investigations which “combine the source of help as in the present study (computer vs. interpersonal) with whether the task itself was performed with the use of a computer” and surveys to “determine the beliefs of students and workers about privacy and monitoring on time-sharing and computer network systems”.<sup>4</sup> In that spirit, which has inspired similar studies, this study aims to examine live chat, a now common combination of interpersonal yet also computer-mediated help, and the privacy beliefs of students related to it.

Virtual reference services were introduced in part as beneficial for library users who experience library anxiety because of its ability to be used remotely and its enhanced sense of anonymity.<sup>5</sup> However, the climate surrounding digital devices has changed significantly since the studies of 1988. Anonymity can no longer be taken for granted in the age of Facebook, data analytics, and mass data breaches. This calls into question the assumption that computer-

mediated reference services like live chat are inherently more attractive to library anxious students.

To investigate, Sanders et al. examined the theoretical connections that exist between library anxiety, information seeking anxiety, and communication privacy management theory in the context of academic library live chat services.<sup>6</sup> Three primary concepts were identified: the perception of interpersonal threat in library anxiety, information seeking anxiety as a type of library anxiety that includes remote library services, and the privacy risk-control assessment in communication privacy management.<sup>7</sup> They tested the hypothesis that information seeking anxiety increased a library user's perceived risk of privacy loss when using live chat services. Evidence supported this conclusion.<sup>8</sup> However, it remains unclear whether this increased perception of risk actually has an observable impact on a student's intent to use live chat services.

Building on that foundation, this analysis seeks to answer that question as it continues to probe the connections between library anxiety, information seeking anxiety, and communication privacy management theory. The authors use inferential statistics to examine a series of hypotheses that follow from the predictions of these three theories. The applicability of these theoretical concepts to real-world library practice, context for the interpretation of this analysis, and future directions for research are discussed.

These frameworks may help to explain how users of library live chat services feel and behave regarding their privacy in response to library anxiety. By better understanding this interaction, practitioners of academic reference services will be better equipped to tailor live chat services to the needs of their library-anxious students.

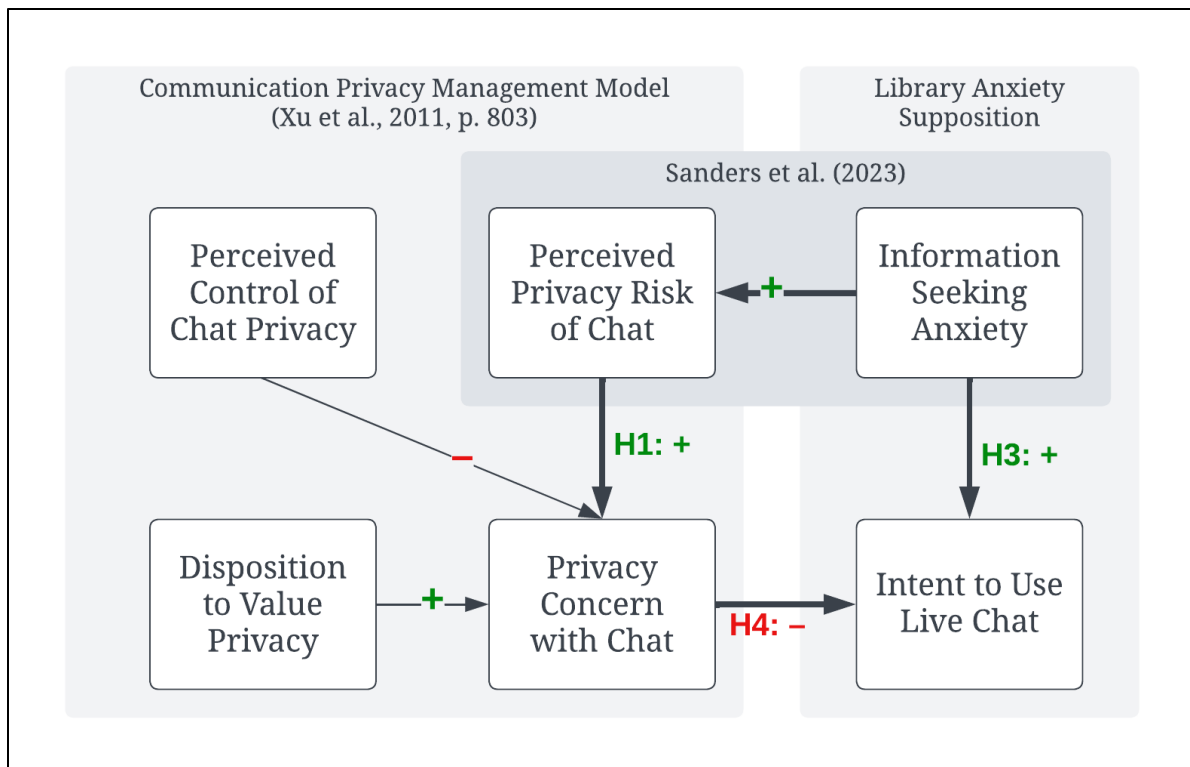
# Hypotheses

This study adapts the communication privacy management model proposed by Xu et al.<sup>9</sup> Into this model, the authors incorporate interactions with information seeking anxiety and their subsequent effects on a student's intent to use live chat. To better establish the veracity of the data and consider confounding variables, other privacy attitudes were included in the analysis to control for their possible influence. These hypotheses are visualized in the diagram in Figure 1.

## H1. Higher perceived privacy risk increases a student's information privacy concerns with live chat

In the model from Xu et al., one's information privacy concerns regarding an institutional service are explained by one's general disposition to value privacy combined with

*Figure 1. Hypothesized relationships to information privacy concerns and intent to use live chat*



one's specific privacy risk-control assessment—the balance between what one believes they would lose in a breach of privacy vs. the degree of control they retain over private information.<sup>10</sup> Sanders et al. showed that higher information seeking anxiety resulted in a perception of more risk of privacy loss when using live chat, influencing this risk-control assessment.<sup>11</sup>

In the theory of communication privacy management, a higher perception of risk influences *privacy rules formation*, which describes the process by which one constructs their expectations about how private information should be given and used in a particular context.<sup>12</sup> Heightened risk contributes to a “greater... tendency for people to develop privacy rules that keep the privacy boundaries closed.”<sup>13</sup> When these rules are discordant with the expectations of live chat service providers---that students be willing to disclose, either explicitly or implicitly, information that is otherwise private---the resulting uncertainty manifests as information privacy concerns.<sup>14</sup>

## **H2<sub>0</sub>. Information seeking anxiety has no direct effect on a student's information privacy concern with live chat**

In the Xu et al. model, an individual's privacy concerns is explainable by a combination of their risk-control assessment or their disposition to value privacy.<sup>15</sup> This model does not include other potential antecedents of information privacy concerns beyond these variables within its scope. Therefore, one would conservatively predict that any change to privacy concerns as a result of information seeking anxiety would most likely act through the medium of risk perception, rather than acting on information privacy concerns directly.

## **H3. Higher information seeking anxiety increases a student's intent to use live chat.**

The library literature tends to hold that students with more library anxiety are more likely to use live chat,<sup>16</sup> consistent with the findings of Karabenick and Knapp regarding

computer-mediated help.<sup>17</sup> This supposition is based on the many consistent findings by researchers of library anxiety that an individual's willingness to seek in-person help from a library employee is often significantly inhibited by a belief that to do so would result in a shameful or embarrassing evaluation by the employee and/or peers.<sup>18</sup> This interaction constitutes a *face risk*, in which "our disclosures cause us embarrassment, [or] embarrass others in our group;... when the face risk is great, a person may not want to reveal personal information."<sup>19</sup> Under the framework of information seeking anxiety, which developed from library anxiety, the same perception of risk continues to be observed.<sup>20</sup> It follows that live chat could ameliorate this concern if it is understood as a more anonymous method of seeking help, thus one which poses less of a face risk.

#### **H4. Higher information privacy concerns with live chat decreases a student's intent to use live chat.**

In addition to the earlier discussion of risk motivating the closure of privacy boundaries in a theoretical sense, many empirical studies have concluded that privacy concerns have the ability to influence an individual by inhibiting their behavior or intent to interact with the target of their concerns.<sup>21</sup> The authors expect the same well-established principle to hold here; however, this prediction is at odds with how live chat is discussed in library literature.

Given the oppositional nature of these predictions, the authors hypothesize a mediating relationship. Information seeking anxiety should increase a student's intent to use live chat as library literature has predicted. However, that anxiety should also increase risk perception, which should in turn increase information privacy concerns. Ultimately, those concerns should at least partially suppress the previously predicted affinity of library anxious students towards live chat.

# Methods

This analysis makes use of a dataset constructed for the 2023 study by Sanders et al., consisting of survey responses from 532 students above the age of 18 at a large, public university in the US South.<sup>22</sup> Participants were asked to respond to demographic questions and psychometric assessments consisting of the Erfanmanesh et al. Information Seeking Anxiety Scale (hereafter: ISAS)<sup>23</sup> and multiple scales proposed by Xu et al. measuring information privacy concerns with chat (CONC), perceived privacy risks of using chat (RISK), perceived privacy control over chat data (CTRL), perceived effectiveness of privacy policy (POLI), disposition to value privacy (VALU), awareness of privacy issues (AWAR), and previous privacy experience (PEXP).<sup>24</sup> Participants were also asked to rate their level of intent to use live chat as a method to contact the university library (CHAT). These abbreviations may be referenced in the glossary in Table 1. The authors opted to use the ISAS instead of Bostick's more commonly used Library Anxiety Scale because of its coverage of contemporary information technologies including remote services.<sup>25</sup> A full account of the construction of this dataset and validation of its measurements may be found in the initial study.<sup>26</sup>

***Table 1. Glossary of abbreviations***

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|              |   |
|--------------|---|
| <b>AWAR:</b> | Awareness of privacy issues                               |
| <b>CHAT:</b> | Intent to use live chat to contact the university library |
| <b>CONC:</b> | Information privacy concerns with chat                    |
| <b>CTRL:</b> | Perceived control over chat data                          |
| <b>ISAS:</b> | Information Seeking Anxiety Scale                         |
| <b>PEXP:</b> | Previous privacy experience                               |
| <b>RISK:</b> | Perceived privacy risk of chat                            |
| <b>VALU:</b> | Disposition to value privacy                              |

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# Analysis

Hypotheses were tested in order of their sequential effects according to the Xu et al. model.<sup>27</sup> An alpha threshold of .05 was used to determine statistical significance.

## Hypotheses 1 and 2

A hierarchical multivariate regression was performed with CONC as the dependent variable to determine if the RISK had a positive effect on CONC as predicted by the Xu et al. model (H1), and whether the inclusion of ISAS as an independent variable significantly improved the model's explanatory power with regard to privacy concerns with live chat (H2<sub>0</sub>). The first block included four variables with potential influence determined by the communication privacy management model—RISK, CTRL, VALU, and POLI—and six more independent variables as controls—PEXP, AWAR, class status (graduate student vs. reference), gender (man/male vs. reference), and race (Asian and Black/African American vs. reference). The second block added ISAS to the independent variables and measured whether the change in the explanatory power of the model, represented by  $R^2$ , was a statistically significant improvement.

The first regression, with ISAS unincluded, was found to have an  $R^2$  of .655, indicating its explanatory power was relatively strong. The second regression, with ISAS included, was found to significantly improve upon the  $R^2$  of the first block to  $R^2$ =.668. Though small, the improvement was statistically significant ( $F_{1,520}=19.81$ ,  $p<.001$ ). This second regression was found to be statistically significant at predicting CONC ( $F_{11,520}=94.92$ ,  $p<.001$ ). For validation, the standardized residuals of the model were examined via a normal Q-Q plot and Kolmogorov-Smirnov normality test, neither of which indicated any significant deviation from normality, indicating suitability of the regression. The results of the second regression are seen in Table 2.



**Table 2. The effect of risk perception and information seeking anxiety on information privacy concerns (linear regression)**

| Regressors | Unstandardized |            | Standardized | t      | Sig. | Collinearity Statistics |       |
|------------|----------------|------------|--------------|--------|------|-------------------------|-------|
|            | B              | Std. Error | $\beta$      |        |      | Tolerance               | VIF   |
| (Constant) | -.320          | .219       |              | -1.460 | .145 |                         |       |
| ISAS       | .183           | .041       | .120         | 4.450  | .000 | .876                    | 1.141 |
| RISK       | .711           | .037       | .608         | 19.162 | .000 | .635                    | 1.574 |
| CTRL       | -.032          | .030       | -.029        | -1.064 | .288 | .867                    | 1.153 |
| VALU       | .256           | .034       | .252         | 7.611  | .000 | .584                    | 1.711 |
| POLI       | -.011          | .028       | -.011        | -.389  | .697 | .869                    | 1.151 |
| AWAR       | -.009          | .032       | -.009        | -.293  | .769 | .693                    | 1.443 |
| PEXP       | -.010          | .029       | -.010        | -.346  | .730 | .819                    | 1.220 |
| Race-Asian | .056           | .063       | .024         | .899   | .369 | .893                    | 1.119 |
| Race-Black | -.309          | .079       | -.101        | -3.905 | .000 | .956                    | 1.046 |
| Gender-Man | .083           | .055       | .040         | 1.509  | .132 | .913                    | 1.095 |
| Class-Grad | .094           | .060       | .042         | 1.552  | .121 | .891                    | 1.122 |

The relationships of privacy attitudes to privacy concerns predicted by the communication privacy management model were supported as expected, with the exception of CTRL. In these data, CTRL was not observed to have a statistically significant effect on CONC.

Holding all other independent variables constant, a one-point increase in risk perception (RISK) was found to increase information privacy concerns (CONC) by 0.711 points ( $p < .001$ ). This strong, positive association between RISK and CONC supports H1. As expected, VALU was also found to increase CONC, with an increase in CONC of 0.256 points for each one-point increase in VALU ( $p < .001$ ).

Surprisingly, a one-point increase in information seeking anxiety (ISAS) was found to increase the information privacy concerns (CONC) by 0.183 points ( $p < .001$ ), even controlling for RISK. While its influence on CONC was relatively small compared to that of RISK, the inclusion of ISAS nonetheless had a statistically significant improvement on the predictive power of the model. The authors must therefore reject the null hypothesis  $H_{20}$  that information

seeking anxiety has no direct effect on students' privacy concern with chat apart from the risk-control assessment. An independent and positive effect by ISAS on CONC was observed.

### **Hypotheses 3 and 4**

Two ordinal logistic regressions were performed with CHAT as the dependent variable. Six control variables were included in both regressions—AWAR, PEXP, gender (man/male vs. reference), class status (graduate student vs. reference), and race (Asian and Black/African American vs. reference). In the first regression, ISAS was included as a predictor. In the second, CONC was added as a second predictor. The first regression of CHAT, with only ISAS and controls, was found to be significant at  $p < .001$  with a chi-square statistic of  $\chi^2(7, N=532)=24.58$ . In this model, ISAS was observed to have a significant effect on CHAT ( $\beta = .280, p = .028$ ). A one-point increase in the five-point ISAS increased the odds of appearing in a higher vs. a lower category of CHAT by  $e^{.280} = 1.323$  or 32.3%. A test of parallel lines was performed to assess the suitability of the proportional odds model and was not statistically significant, indicating that proportional odds assumption is appropriate.

The second regression including CONC was performed to observe specifically how accounting for privacy concerns may affect the relationship between ISAS and CHAT. In the second model, ISAS ( $\beta = .413, p = .002$ ) and CONC ( $\beta = -.342, p < .001$ ) were both found to have a statistically significant influence on CHAT. The overall model was found to be statistically significant at  $p < .001$  with a chi-square statistic of  $\chi^2(8, N=532)=39.05$ . Again, a test of parallel lines was performed and was not statistically significant. When controlling for CONC, the strength of the effect of ISAS on CHAT was substantially increased, demonstrating the suppressing effect CONC has on ISAS positive relationship with CHAT. The results of the second regression are seen in Table 3.

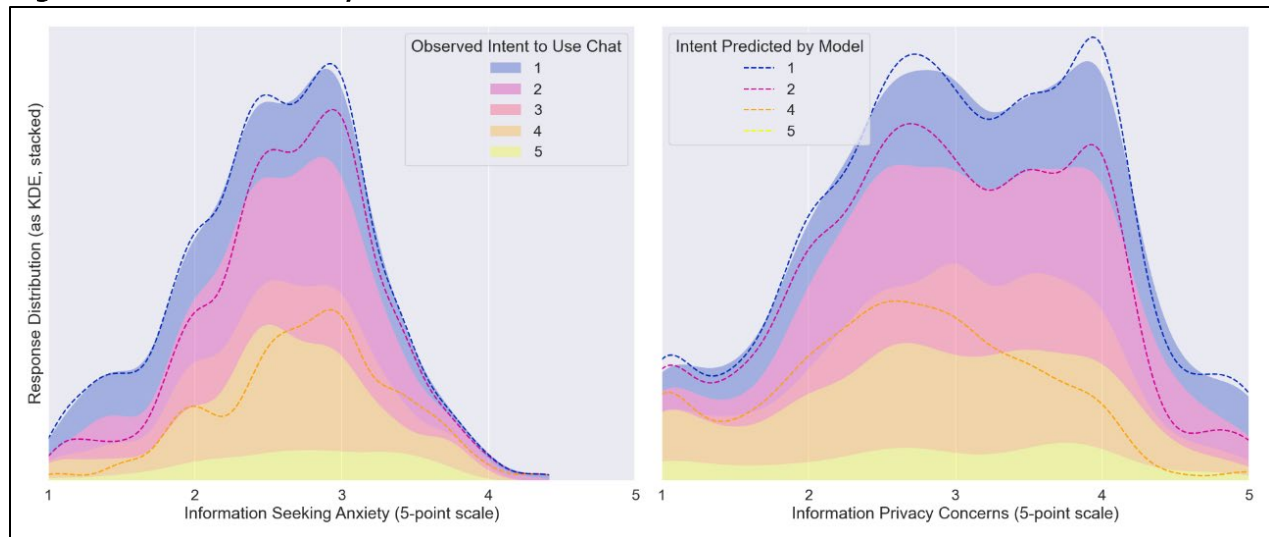
**Table 3. The effect of information seeking anxiety and information privacy concerns on the intent to use live chat (ordered logistic regression, log odds)**

| Threshold         | Estimate | Std. Error | Wald   | df | Sig.  | 95% Confidence Interval |             |
|-------------------|----------|------------|--------|----|-------|-------------------------|-------------|
|                   |          |            |        |    |       | Lower Bound             | Upper Bound |
| Chat Intent 1 2   | -0.763   | 0.460      | 2.752  | 1  | 0.097 | -1.665                  | 0.139       |
| Chat Intent 2 3   | 0.536    | 0.459      | 1.362  | 1  | 0.243 | -0.364                  | 1.436       |
| Chat Intent 3 4   | 1.140    | 0.461      | 6.105  | 1  | 0.013 | 0.236                   | 2.044       |
| Chat Intent 4 5   | 2.873    | 0.479      | 35.925 | 1  | 0.000 | 1.934                   | 3.813       |
| <b>Regressors</b> |          |            |        |    |       |                         |             |
| ISAS              | 0.413    | 0.134      | 9.563  | 1  | 0.002 | 0.151                   | 0.675       |
| CONC              | -0.342   | 0.088      | 14.947 | 1  | 0.000 | -0.515                  | -0.168      |
| AWAR              | 0.073    | 0.093      | 0.616  | 1  | 0.433 | -0.109                  | 0.256       |
| PEXP              | 0.063    | 0.092      | 0.470  | 1  | 0.493 | -0.117                  | 0.242       |
| Race-Asian        | -0.009   | 0.199      | 0.002  | 1  | 0.963 | -0.398                  | 0.380       |
| Race-Black        | -0.190   | 0.250      | 0.577  | 1  | 0.448 | -0.680                  | 0.300       |
| Gender-Man        | -0.352   | 0.174      | 4.097  | 1  | 0.043 | -0.693                  | -0.011      |
| Class-Graduate    | 0.736    | 0.193      | 14.496 | 1  | 0.000 | 0.357                   | 1.114       |

Holding other variables constant, a one-point increase in information seeking anxiety (ISAS) increased the odds of appearing in a higher category for intent to use live chat (CHAT) by  $e^{0.413}=1.511$  or 51.1% in the final model. Likewise, a one-point increase in information privacy concerns (CONC) changed the odds of appearing in a higher category for intent to use live chat (CHAT) by  $e^{-0.342}=0.710$  or -29.0%. These findings support both H2 and H3. Furthermore, these findings support the conclusion that privacy concern is a mediator between information seeking anxiety and intent to use library live chat, and that the mediating relationship is negative, i.e., the concerns suppress the positive relationship between information seeking anxiety and the intent to use live chat.

To better assess the accuracy of the regression, its predictions were tested against the observed data. For each sample in the dataset, the second regression was used to attempt to predict that sample's response to CHAT. The predicted values were then compared to the observed values. CONC and ISAS are able to explain much of the variance in responses to

**Figure 2. Observed vs. predicted values of intent to use live chat**



CHAT. The model predicted the exact value of CHAT for 31.2% of samples. On average, the predicted values were within 1.19 points of those observed. However, this model is unable to predict responses of value 3 (“Neither likely nor unlikely”), struggles to predict responses of value 5 (“Extremely likely”), and somewhat underestimates responses of 1 (“Extremely unlikely”). Consequently, responses of 2 (“Somewhat unlikely”) and 4 (“Somewhat likely”) were somewhat overestimated. The model’s predicted values of CHAT across both the ISAS and CONC scales are visualized against the actual observed responses in Figure 2.

## Discussion

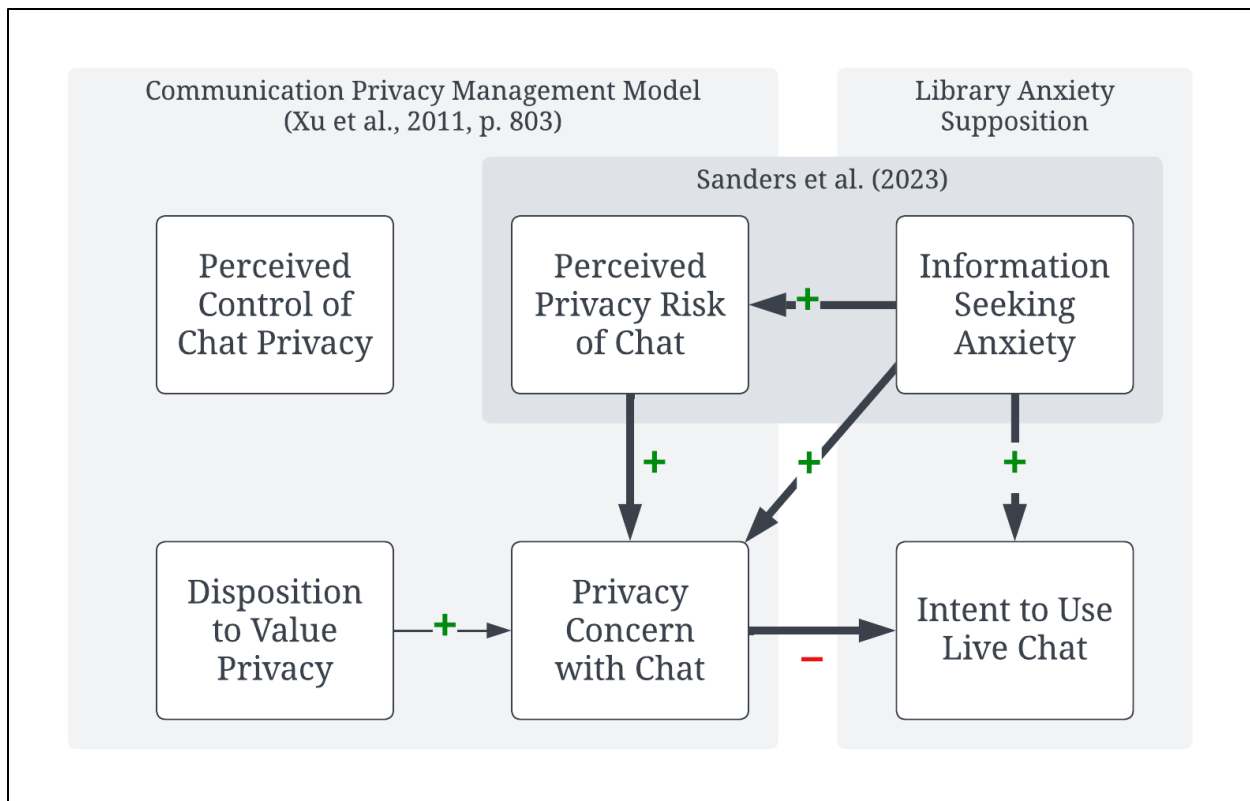
### Findings

To summarize: H1, H3, and H4 were supported. H2<sub>0</sub> was rejected. These findings demonstrate that, although live chat is generally a preferable option for seeking reference assistance for library-anxious students, their increased sensitivity to privacy risks and concerns may interfere with that preference.

This study hypothesized that because information seeking was found to increase the perception of privacy risk, a chain reaction must occur: the risk perception increases privacy concerns, and those concerns decrease a student’s intent to use live chat. If true, this reaction would suppress a hypothesized affinity towards live chat by anxious students to some degree. The evidence supported these hypotheses.

An additional, non-hypothesized relationship was also discovered. It was found that information seeking anxiety also acted directly to increase privacy concerns. Our application of communication privacy management theory does not account for this relationship. It suggests that the increase to privacy concerns by information seeking anxiety acts on an additional mechanism unrelated to either the risk-control assessment or one’s disposition to value privacy.

**Figure 3. Observed relationships to information privacy concerns and intent to use live chat**



It could be extrapolated, according to these results, that a highly library-anxious student is more likely to use live chat, but they are also more sensitive to privacy risks and concerns. An especially well-designed service that minimizes such concerns could support that student's full affinity for live chat. Conversely, a poorly-designed service that does nothing to dissuade privacy fears may essentially cancel it out, and see little benefit from offering live chat as a service for library anxious students.

The full model of new relationships discovered in these data between information seeking anxiety and privacy attitudes is visualized in Figure 3.

## **Limitations**

The empirical analysis used in this study is cross-sectional rather than longitudinal. Without multiple observations of the same individuals before and after the alteration of variables, our ability to make causal inferences from these data is limited and relies on theoretical justification.

The ISAS has not previously been applied in the context of undergraduate students in the United States. Likert measurements of attitudes cannot be guaranteed to remain equally valid in cross-cultural settings.<sup>28</sup> Researchers must consider its validity for students in the US as deserving of further scrutiny. The authors believe that this study suggests that these cross-cultural applications may require minimal alteration.

It is also important to note the "privacy paradox"—the common observation that a person's privacy intentions are often at odds with their behavior.<sup>29</sup> A more exhaustive study on this topic would incorporate data recording students' actual use of live chat, rather than their intentions. However, such a study could be perceived as invasive due to the nature of gathering such data.

## Future Research

This study provides additional evidence that information seeking anxiety is a useful theoretical tool for the repertoire of library science. Additionally, it shows that communication privacy management offers a rigorous tool to better understand how privacy attitudes affect library user behaviors. More research is needed that explores other relationships between information seeking anxiety, communication privacy management, and library live chat or other library user interactions. These frameworks could be especially helpful additions to the privacy discourse surrounding the use of analytics in libraries.

It would be beneficial to support these findings with more longitudinal data that investigates changes to variables such as privacy policies, technological features, or employee training. Qualitative data could contribute significantly to this area of research, especially regarding the unexpected mechanism through which information seeking anxiety may affect information privacy concerns independent of risk perception.

Trust has been shown to have multiple influences on the relationship between intent and real behavior in the context of privacy concerns.<sup>30</sup> More research is needed to understand what factors influence institutional trust among library users, how these factors relate to policy effectiveness, and how trust operated in libraries as distinct from other organizations. The relationship between trust, institutional policies, and information privacy concern typically assumes a certain level of social separation between the user and the institution.<sup>31</sup> It is unclear whether a university library is better understood as an impersonal institution or, because of its interconnectedness with student social networks, as one where more familiar connections dominate.

## Future Practice

These findings make a strong argument to reassess the privacy practices of libraries in regards to live chat services. It cannot be assumed that live chat provides an inherently preferable reference solution for students with library anxiety. These findings show that students with library anxiety want to use live chat, but they are also more sensitive than others about whether the library meets their expectations of privacy safety.

While it was outside the scope of this analysis to determine the specific concerns that students may have with live chat privacy, practitioners of reference services would benefit from having a framework for imagining what those concerns may be, why they arise, and what libraries could do to mitigate them. Communication privacy management offers a system to organize these thoughts using the concepts of *privacy rules formation*, the construction of privacy expectations, and *privacy boundary coordination*, the series of negotiations made by the provider and receiver of private information to align their expectations towards a shared understanding.<sup>32</sup> By working backwards from a given outcome, one may hypothesize about the rules and choices led to that outcome and ultimately “take corrective action to return boundary management back to a more synchronous level.”<sup>33</sup>

Among other factors, rules formation is highly influenced both by the situational context and an assessment of risk and reward.<sup>34</sup> Libraries have limited individual power to control the context in which online services are provided. Your library may not carry the same privacy risks as a large corporation who practices surveillance—one hopes—but your services are nonetheless neighboring theirs on a student’s screen. It’s important to recognize that in this shared, digital ecosystem, libraries inherit the privacy rules that students develop to defend themselves against worse actors. Privacy policies, when public and accessibly written, reduce ambiguity about how your organization’s treatment of private information differs from the norm,



and have been observed to reduce the perception of risk.<sup>35</sup> In existing policy statements, consider additional ways to make risk mitigations explicit, e.g., providing time parameters for how long information is kept, or explaining how the library will hold itself accountable to the policy.<sup>36</sup>

Understanding boundary coordination could also inform better practice. To initiate a chat, students must be willing to see the library as a confidant, a role that comes with certain assumptions and expectations.<sup>37</sup> A status differential, like the one between a student and a librarian, can increase the perception of risk; therefore, fellow students may make feel like safer chat operators.<sup>38</sup> Additionally, disclosure can feel more risky when a discloser's social network significantly overlaps with the disclosee, especially in cases where such information concerns self-esteem and perceived competence.<sup>39</sup> In a university setting, social networks may be small. There is a high chance that revealing one's identity to a user, merely in an attempt to be friendly, reveals a social overlap that increases that user's sense that their embarrassing information could be shared with people they know. Finally, mechanisms of control can be powerful tools to facilitate boundary coordination.<sup>40</sup> Libraries may experiment with solutions like allowing a user to choose whether the chat transcript or any personally identifiable information are preserved after an interaction is concluded.

## **Conclusion**

When librarians first began using virtual reference services like live chat, they were already well aware of the phenomenon of library anxiety. Live chat represented an opportunity to cater to those students in a way that alleviated some of that anxiety, just as computer-mediation had helped Karabenick and Knapp's subjects in 1988.<sup>41</sup> Now, however, people's

relationships with digital services have changed. Students live in a digital landscape where information privacy concerns are a real threat.

This study proposed to investigate how students with library anxiety might be affected by information privacy concerns relating to library live chat services. Building on the work of Sanders et al., which established a link between information seeking anxiety and communication privacy management theory,<sup>42</sup> the authors continued to use these frameworks to investigate the connection.

Inferential statistics were used on a dataset of survey responses from 532 students at a large, public university. The analysis demonstrated that risk perception and privacy concerns indeed had a mediating and suppressive effect on the positive relationship between information seeking anxiety and the intent to use live chat. These findings support the predictions of both information seeking anxiety theory and communication privacy management theory.

Furthermore, it was observed that information seeking anxiety increased both the perception of privacy risk and information privacy concerns independently of each other, creating a direct mediating relationship of information privacy concerns on information seeking anxiety and the intent to use live chat. The specific mechanism by which information seeking anxiety raises information privacy concerns independently from risk assessment was not observed.

Various limitations of the study are discussed, and future directions for research are suggested. The authors also detailed the implications of these findings for practitioners of reference services, including the need to proactively address the privacy concerns of students with information seeking anxiety.

## Endnotes

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<sup>1</sup> Stuart A. Karabenick and John R. Knapp, "Help Seeking and the Need for Academic Assistance," *Journal of Educational Psychology* 80, no. 3 (September 1988): 406–8, <https://doi.org/10.1037/0022-0663.80.3.406>.

<sup>2</sup> Stuart A. Karabenick and John R. Knapp, "Effects of Computer Privacy on Help-Seeking," *Journal of Applied Social Psychology* 18, no. 6 (1988): 469, <https://doi.org/10.1111/j.1559-1816.1988.tb00029.x>.

<sup>3</sup> Karabenick and Knapp, 470–471.

<sup>4</sup> Karabenick and Knapp, 471.

<sup>5</sup> Suzanne M. Gray, "Virtual Reference Services: Directions and Agendas," *Reference & User Services Quarterly* 39, no. 4 (2000): 365–75; Anthony J Onwuegbuzie, Qun G Jiao, and Sharon L Bostick, *Library Anxiety: Theory, Research, and Applications* (Lanham: University Press of America, 2004); Jody Condit Fagan and Christina M. Desai, "Communication Strategies for Instant Messaging and Chat Reference Services," *The Reference Librarian* 38, no. 79–80 (November 20, 2002): 121–55, [https://doi.org/10.1300/J120v38n79\\_09](https://doi.org/10.1300/J120v38n79_09); Lesley J. Brown, "Trending Now—Reference Librarians: How Reference Librarians Work to Prevent Library Anxiety," *Journal of Library Administration* 51, no. 3 (March 24, 2011): 309–17, <https://doi.org/10.1080/01930826.2011.556950>.

<sup>6</sup> Bridgette Sanders, Jon B. Moore, and Kimberly Looby, "Ask What You Want; We Don't Know Who You Are: Live Chat, Library Anxiety, and Privacy in an Academic Library," in *Privacy and Safety in Online Learning*, ed. Denise Fitzgerald Quintel and Amy York (MT Open Press, 2023), 65–82, <https://doi.org/10.56638/mtopb00123>.

<sup>7</sup> Sanders, Moore, and Looby, 67–68.

<sup>8</sup> Sanders, Moore, and Looby, 76.

<sup>9</sup> Heng Xu et al., "Information Privacy Concerns: Linking Individual Perceptions with Institutional Privacy Assurances," *Journal of the Association for Information Systems* 12, no. 12 (2011): 1.

<sup>10</sup> Xu et al., 803.

<sup>11</sup> Sanders, Moore, and Looby, "Ask What You Want; We Don't Know Who You Are," 76.

<sup>12</sup> Sandra Petronio, *Boundaries of Privacy: Dialectics of Disclosure* (Albany: State University of New York Press, 2002), chap. 2, <https://muse.jhu.edu/book/4588>.

<sup>13</sup> Petronio, 67.

<sup>14</sup> Xu et al., "Information Privacy Concerns," 803–4; Tamara Dinev and Paul Hart, "An Extended Privacy Calculus Model for E-Commerce Transactions," *Information Systems Research* 17, no. 1 (March 2006): 61–80, <https://doi.org/10.1287/isre.1060.0080>.

<sup>15</sup> Xu et al., "Information Privacy Concerns."

<sup>16</sup> Gray, "Virtual Reference Services," 372; Onwuegbuzie, Jiao, and Bostick, *Library Anxiety*, 268–74; Fagan and Desai, "Communication Strategies for Instant Messaging and Chat Reference Services," 126, 140; Brown, "Trending Now—Reference Librarians," 314.

<sup>17</sup> Karabenick and Knapp, "Effects of Computer Privacy on Help-Seeking."

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<sup>27</sup> Xu et al., "Information Privacy Concerns," 803.

<sup>28</sup> Rensis Likert, "A Technique for the Measurement of Attitudes" (New York, Columbia University, 1932), 52.

<sup>29</sup> Smith, Dinev, and Xu, "Information Privacy Research," 1000.

<sup>30</sup> Smith, Dinev, and Xu, 999–1000.

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<sup>32</sup> Petronio, *Boundaries of Privacy*, chaps. 2–3; Xu et al., "Information Privacy Concerns," 800–802.

<sup>33</sup> Petronio, *Boundaries of Privacy*, 5.

<sup>34</sup> Petronio, 65.

<sup>35</sup> Xu et al., "Information Privacy Concerns," 809–11; Petronio, *Boundaries of Privacy*, 77–78.

<sup>36</sup> Petronio, *Boundaries of Privacy*, 77–78, 81–82.

<sup>37</sup> Petronio, 92–94.

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