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Addressing the Information Crisis: Understanding the Relationships Between Information Choices and Health and Academic Outcomes

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ADDRESSING THE INFORMATION CRISIS: UNDERSTANDING THE RELATIONSHIPS BETWEEN INFORMATION CHOICES AND HEALTH AND ACADEMIC OUTCOMES

by

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THESIS

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Abstract

Addressing the Information Crisis: Understanding the Relationships Between Information Choices and Health and Academic Outcomes

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In today's society, the prevalence of the "share first, question later" mentality has become a norm. However, this approach to information can have severe consequences when it comes to information seeking behaviors, and health and academic outcomes. Previous research has already illustrated that people are not very good at evaluating information, they prefer to surround themselves with confirming viewpoints, and accepting health misinformation can adversely affect one's health. Building upon this knowledge, the current study aimed to investigate whether people have preferences in the information they use and their potential implications for health and academic outcomes. Specifically, it was examined how these preferences relate to and potentially shape the impact of prior beliefs and behaviors regarding information searching and evaluation. Although the study did not establish a direct link between these preferences and health and academic outcomes, it did reveal that individuals do exhibit preferences for certain information traits, influencing their engagement with and acceptance of information. Furthermore, the findings emphasized the contextual nature of information preferences, suggesting that strategies for information dissemination and evaluation need to be tailored to specific topics or domains to effectively engage people. The findings also further substantiated the importance of developing information literacy skills to improve health outcomes and academic success and addressing biases in information seeking behaviors.

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The ‘share first, question later’ mentality has become commonplace today. While this may be inconsequential when it involves a doctored video on TikTok, when it comes to health information, it can lead to people not adhering to their medical treatments or healthcare avoidance altogether. In academics, where education emphasizes including reliable and accurate supporting evidence for all claims, sharing first and questioning later can lead to frustration and poor academic outcomes. Previous relevant research found inadequacies in students’ abilities and desires to appropriately evaluate information (e.g., Breakstone et al., 2021), acceptance of health misinformation to be associated with adverse health outcomes (e.g., Bogart et al., 2010; Jolley & Douglas, 2014), and people tended to surround themselves with arguments that were in alignment with their views (e.g., Metzger et al., 2020). The current study built upon this research by combining these ideas to examine whether and how (a) people’s preferences for different attributes of the information, (b) the sources they surround themselves with, (c) their beliefs and behaviors regarding finding and evaluating information, (d) the confidence they have in their ability to determine whether information is accurate, and (e) their willingness to admit their own knowledge limitations and be open to other’s knowledge, predicted health and academic outcomes. Identifying interrelationships between these concepts helped identify how and when people evaluate information as a possible risk factor for adverse physical and mental health outcomes, poor academic achievement, and low student engagement.

Information Evaluation on Health and Academics

While much of the information people encounter daily may seem insignificant, the information itself and how it is processed has been found to notably impact attitudes, intentions,

and behaviors (e.g., Braddock & Dillard, 2016). The COVID-19 pandemic provided a crucial opportunity to examine the impact on attitudes by identifying the relationship between COVID-19 misinformation acceptance and decreased trust in healthcare (e.g., Ahorsu et al., 2022; Makowska et al., 2022), science (e.g., Agley & Xiao, 2021), news media (e.g., Ejaz & Ittefaq, 2020; Fletcher et al., 2020) and government (e.g., Fletcher et al., 2020). In addition to influencing attitudes towards those providing the information, acceptance of misinformation has had detrimental effects on personal and public health behaviors (e.g., Donzelli et al., 2018; Johnson et al., 2021; Loomba et al., 2021). For example, COVID-19 misinformation acceptance was associated with a decreased intention to vaccinate (e.g., Loomba et al., 2021) and implement other protective behaviors, such as mask-wearing and social distancing (Hornik et al., 2021). Misinformation acceptance has also been linked to other adverse health outcomes, such as lower HIV prevention and treatment rates (e.g., Bogart et al., 2010; Garett & Young, 2022; Kalichman et al., 2012), lower pediatric vaccination rates (e.g., Jolley & Douglas, 2014; Zimet et al., 2013), and greater acceptance of unproven cancer treatments (e.g., Gage-Bouchard et al., 2018; Warner et al., 2021; Wilner & Holton, 2020). Perhaps one of the most famous and longest-lasting vaccine misinformation scandals is that of Andrew Wakefield. In 1998, Wakefield and colleagues published an article suggesting the MMR vaccine predisposed children to autism. While this has been thoroughly debunked, the negative impact of this misinformation is still being seen today through decreased MMR vaccination rates and increased measles outbreaks (Gilkey et al., 2016; Torjesen, 2021). Additionally, those who refuse the MMR vaccination often refused other vaccines (e.g., Gilkey et al., 2016), which indicated misinformation may have affected opinions about the information's direct topic and had overarching effects on related health topics.

In addition to negative health behaviors and outcomes due to the acceptance of inaccurate information within an argument, using alternative news media sources (e.g., digital media) was associated with greater acceptance of health misinformation and negative health behaviors (e.g., De Coninck et al., 2021; Loomba et al., 2021). Moreover, those who reported more frequent usage of Facebook and Twitter for news scored lower on questions assessing COVID-19 treatment and symptom knowledge (Dhanani & Franz, 2020). These results indicated that the types of information people surrounded themselves with may have been associated with their health behaviors. Specifically, people who surrounded themselves with sources that commonly presented inaccurate health information had worse health intentions and behaviors. As health behaviors have routinely been associated with both negative and positive health outcomes (e.g., Andrew et al., 2010; Madison et al., 2021), this study examined the direct effect of information behaviors and other relevant information predictors due to the expectation that repeated exposure to health information led to corresponding health behaviors, and subsequently health outcomes. Interestingly, health outcomes have not been the only aspect of people's lives affected by their information choices.

It has been pertinent to address how poor choices of information and information sources influence how well people do in school in terms of academic achievement and engagement. Prior research has found a lack in students' abilities and desires to appropriately evaluate information (e.g., Breakstone et al., 2021) despite academics requiring these skills to appropriately complete coursework, guide research questions, and trust professors' teachings. The academic environment has more recently emphasized the importance of information literacy, which is the ability to find, evaluate and use appropriate information, as a vital component of student learning and success (e.g., Blake et al., 2017; Shao & Purpur, 2016). Additionally, the ability to appropriately evaluate

social and political online information has been termed civic online reasoning, and despite the previous idea that growing up with technology provided benefits to online information usage, students struggled to search for and select credible sources (e.g., Pan et al., 2007) and evaluate the information they had chosen (e.g., Walraven et al., 2009). Furthermore, the inclusion of an information literacy or civic online reasoning course requirement was associated with higher student retention rates and higher GPAs among first-year students (Blake et al., 2017). Overall, these findings indicated that the way and frequency in which students evaluated information not only had an immediate effect on the acceptance of information but also could have had a more significant and longer-lasting influence on academic success. While inaccurate evaluations of the credibility of information could lead to adverse health and academic outcomes, it is also important to examine factors that influence the information evaluation process.

Previous Information Behaviors, Information Beliefs, and Self-Efficacy

People do not go into an information evaluation situation empty-handed. The information they surround themselves with often agrees with their biases, and they prefer information that confirms what they already think (Metzger et al., 2020). In the real world, this had manifested in news media preferences, with those identifying with liberal or conservative political parties finding news media supported by their political party to be the most credible and preferring it to all other news media (Pew Research Center, 2020). While this information may not always be trustworthy, if it tells people what they want to hear or is very entertaining, they may not look any further into the credibility of the information (Chen, 2016). Additionally, sources whose messages are consistent with previous attitudes were seen as more credible than those whose messages challenge previous attitudes (e.g., Knobloch-Westerwick & Meng, 2009; Metzger et al., 2020). For example, Metzger et al. (2020) found that selection of a news source was not due

to the desire to reduce the uncomfortableness felt when exposed to counter-attitudinal information but was instead based on perceptions of how credible the information and source were. These findings indicated that credibility aspects of the source or message structure may have driven preferences for and selection of information.

In addition to often surrounding themselves with arguments that support beliefs, this selective exposure to information may have also led to developed preferences towards other aspects of the information, such as whether people preferred journal articles to social media posts (e.g., Fan et al., 2021), what characteristics were important to them when it comes to the author of the information (e.g., Bråten et al., 2018; Thon & Jucks, 2017), and whether they preferred hard-hitting facts or something with a little more flair (e.g., Kopfman et al., 1998; Okuhara et al., 2018). Additionally, because people viewed attitude-consistent sources as more credible, aspects of these sources (e.g., the expertise of the author, the type of medium used, and whether the information is fact-based or story structure) were expected to play a role in decisions to accept future information (Metzger, 2020). In other words, an individual who routinely looked to specific sources of information would find aspects of these sources more credible and continue to use and prefer sources with similar aspects. Furthermore, any deviation from this path and intention to further investigate this information required the confidence to do so.

Curiosity, deemed by many to be human nature, has routinely contributed to the advancement of the human species and is an important factor in human behavior (e.g., Berlyne, 1954; Kobayashi et al., 2019), However, to satiate curiosity related to knowledge and information, an individual must first have felt confident in their ability to search for accurate information and evaluate information sources. Without this confidence, people were less likely to attempt to determine the accuracy of information and more likely to give up when they could

not verify the information (Kurbanoglu, 2003; Kurbanoglu et al., 2006). An individual's confidence in their ability to complete the behaviors necessary to reach a specific goal has been known as self-efficacy (Bandura, 1977). One downfall of self-efficacy has been that it is domain-specific, meaning high self-efficacy for one behavior cannot be generalized to a completely irrelevant behavior. However, evidence has suggested that self-efficacy can be generalized to closely related behaviors (Hasan, 2006). Previous research focusing on the effects of self-efficacy on persuasion and misinformation evaluation found that higher self-efficacy predicted lower persuasion rates and greater identification of misinformation on social media (Chen & Cheng, 2019; Hopp, 2021). Information literacy self-efficacy has also been identified as a predictor of student academic achievement (Bayram & Comek, 2009). Regarding health behaviors, the relationship between message framing and motivation to quit smoking was influenced by quitting self-efficacy (Riet et al., 2008). Additionally, better information orientation and self-efficacy to seek health information were associated with more healthy activities (Basu & Dutta, 2008).

The Theory of Planned Behavior has served as a theoretical basis for these previous ideas, as it addressed the roles of previous behaviors, beliefs, and self-efficacy in predicting behavioral intentions and behaviors. As seen in Figure 1, the theory of planned behavior focused on the ability to predict behaviors through three factors: attitudes towards behaviors, subjective norms, and perceived behavioral control. The theory argued that beliefs informed behavioral attitudes about the consequences and benefits of the behavior (behavioral beliefs), subjective norms were influenced by perceived expectations of others (normative beliefs), and perceived behavioral control was impacted by beliefs about barriers and facilitators to the behavior (control beliefs/self-efficacy; Ajzen, 1985). Persuasion research using the theory of planned behavior

found that people preferred and perceived information in alignment with their initial attitudes as more credible (van Strien et al., 2016), and past behaviors informed future attitudes, perceived control, and behaviors (e.g., Hagger et al., 2018; Lauren et al., 2019; Wang & Zhang, 2016). Other factors, such as intellectual ego, have also played a role in when and how people evaluate information.

Intellectual Humility

It has become quite common nowadays to have come across people who, despite evidence contrary to their arguments, remained steadfast in their beliefs and intolerant of others' knowledge. These people have often been highly intellectually egotistical and boasted about having knowledge others do not. On the opposite end of the spectrum has been those people who were high in intellectual humility. They tended to identify and accept their knowledge limitations and biases and have been more open to the ideas of those who might have knowledge they did not (e.g., Porter & Schumann, 2018; Rodriguez et al., 2019; Whitcomb et al., 2017). Highly intellectually humble people also have been more likely to be curious and investigate information further when they felt additional information was needed to make a decision (Koetke et al., 2021). Previous intellectual humility research has found that those higher in intellectual humility had a greater desire to learn, invested more in their learning, and were better at evaluating the strength and credibility of information (e.g., Krumrei-Mancuso et al., 2020; Porter et al., 2020). Wong & Wong (2021) examined the relationship between intellectual humility and academic performance of post-secondary students and found a small indirect effect of intellectual humility on academic performance, indicating intellectual humility may have facilitated academic performance through academic engagement. Krumrei-Mancuso et al. (2020) also examined the relationships between intellectual humility and a variety of other factors and found

that intellectual humility was associated with having more accurate judgments of one's knowledge level, greater motivation to learn, and more flexible thinking. COVID-19 also opened a door for intellectual humility research. Huynh & Senger (2021) reported that greater intellectual humility predicted more positive COVID-19 vaccination attitudes and greater intention to vaccinate. Koetke et al. (2021) found that intellectual humility predicted COVID-19 information investigative behaviors, with those high in intellectual humility more likely to have engaged in investigative behaviors.

While the concept of intellectual humility, based on previous humility research (e.g., Davis et al., 2017; Tangney, 2000; Roberts & Cleveland, 2016), has more recently begun to grab the attention of social scientists (e.g., Roberts & Wood, 2003; Porter & Schumann, 2018; Zmigrod et al., 2019), a variety of definitions have been used throughout the literature. For example, Roberts and Woods (2003) argued for intellectual humility to refer to the pursuit of knowledge without regard for social status. Others, however, highlighted the importance of knowledge limitation awareness and open-mindedness (e.g., Porter & Schumann, 2018; Rodriguez et al., 2019; Whitcomb et al., 2017). The proposed study will consider all previous work and examine intellectual humility in terms of independence of intellect and ego, openness to revising one's viewpoint, respect for others' viewpoints, and lack of intellectual overconfidence in accordance with the scale developed by Krumrei-Mancuso and Rouse (2016).

Preference Based Modeling

While where people got information from, such as mainstream news media, social media, and classroom lectures, played a role in determining the argument stances they chose to accept, and their previous information relevant behaviors and beliefs, self-efficacy, and intellectual humility informed the preferences they had for these sources of information, all concepts

together contribute to an individual's demands for information. In microeconomics, demand refers to the desire of consumers to purchase goods and services and their willingness to pay for them based on several factors, such as price, perceived quality, advertising receptivity, and income (e.g., Shafer & Sonnenschein,1982). In other words, consumers chose goods and services that satisfied wants and needs, also known as maximizing utility. As marketing theories have been useful in allowing businesses to understand their customers' preferences, these theories can also be used to better understand how to present information in a way that is consistent with people's preferences or information demand.

Two theories, Lancaster's characteristics demand theory and the random utility theory, appropriately addressed consumer demand and have provided a theoretical basis for understanding people's preferences, or demand, for information (Lancaster, 1966; McFadden 1981). Lancaster's characteristics demand theory proposed that all goods and services could be described by their attributes, and their value depended on these attributes and their levels (Lancaster, 1966). For example, when choosing to buy a car, the decision is not decided based directly on the car itself, but instead, importance is placed on several characteristics, or attributes, of the car, such as color, gas mileage, and cost and it is these utilities (importance values) that influence decisions. When involving a number of discrete attributes, this decision can best be described using the random utility model, which assumed that when choosing between options, people chose the option with the highest personal utility (e.g., Azari et al., 2012; Hess et al., 2018). For example, in choosing one car over another, if an individual is looking for an inexpensive vehicle but does not care about the vehicle's color, its cost has a more significant impact (utility) on their decision than the color. Additionally, the random utility theory posited that the probability of choosing one option (i) over the other (j) was determined by the observed

characteristics of the choice options and unobserved characteristics of the individual making the choice (see Equations 2 and 3; Lancaster, 1966; Walker & Ben-Akiva, 2002). While various methods have been used to examine these relationships, using a discrete-choice paradigm furthered traditional approaches based on stated preferences by observing individual behaviors in a slightly more "real-life" choice scenario.

$$U_{nj} = V_{nj} + \varepsilon_{nj} \tag{1}$$

$$U_{nj} = utility\ for\ option\ j$$

$$V_{nj} = observed\ component$$

$$\varepsilon_{nj} = random\ (unobserved)\ component$$

$$V_{nj} = \alpha + \beta_1 Expertise + \beta_2 Medium + \beta_3 Structure \tag{2}$$

$$P_{ni} = P(U_{ni} > U_{nj}) \forall\ j \neq i \tag{3}$$

$$P_{ni} = P(V_{ni} + \varepsilon_{ni} > V_{nj} + \varepsilon_{nj}\ \forall\ j \neq i)$$

$$P_{ni} = P(\varepsilon_{nj} - \varepsilon_{ni} < V_{ni} - V_{nj}\ \forall\ j \neq i)$$

$$P_{ni} = \int I(\varepsilon_{nj} - \varepsilon_{ni} < V_{ni} - V_{nj}\ \forall\ j \neq i)\ f(\varepsilon_n) d\,\varepsilon_n$$

Discrete choice modeling is a preference-based model often used in market research, advertising (e.g., Barroso & Llobet, 2012), and modeling patient health service preferences (e.g., Cunningham et al., 2014). Discrete choice modeling includes people choosing between sets of

attribute levels, known as profiles, with each choice set being called a task. For example, a task looking at vehicle choice would include two or more profiles, and each profile would include specific attribute levels. In other words, one profile could be of a red two-door car with low gas mileage and another of a black four-door SUV with high gas mileage. In this instance, the attributes are vehicle color, the number of doors, and gas mileage, and the profiles include specific levels for each attribute. Including and examining level-based choices provides even greater identification of utilities as it provides specifics on the aspect of the attribute influencing the decision. In the car example, including different levels of the color attribute allows researchers to determine what color is most popular and drives the utility value. While it is essential to review the basis for using discrete choice modeling, the process of determining information attributes and levels and prompt topics must also be addressed.

Information Attributes and Prompt Topics

People often have based their choices of information on how credible and trustworthy they perceived the information argument and the authors of the information (e.g., Metzger et al., 2020). Previous communication research has identified various source attributes that contribute to these credibility perceptions, including the expertise of the author of the information (source expertise) and the type of information medium (message medium; e.g., social media, textbook, or article; Metzger et al., 2003; Pornpitakpan, 2006). Specifically, source expertise has been shown to influence how information was processed and accepted, with information from an expert (versus a non-expert) having been associated with increased credibility ratings of health information (e.g., Eastin, 2001) and greater rates of persuasion (e.g., Clark, 2012; DeBono, 1988). Additionally, the medium of the message has been linked to information perceptions, with more reputable sources (e.g., government websites, textbooks, journal articles) seen as more

trustworthy (e.g., Figueiras et al., 2021). However, reputable sources were not always the sources relied upon for information (e.g., Figueiras et al., 2021), further revealing the need to address people's' choices in source types. Additionally, the structure of the information's argument, whether it was fact-based or relied on personal stories to convey the message, also has played a role in the acceptability of the message.

Story-structured arguments, or narratives, have had the ability to increase audience engagement and message believability, reduce counter-arguing, and influence behavior outcomes (e.g., Nabi & Green, 2015). For example, Bullock et al. (2021) not only solidified the idea that story-structured arguments were perceived as being more persuasive but also that this occurred due to them being easier to process. While the use of narratives could have positive effects on behaviors when used appropriately (e.g., Fitzgerald et al., 2019; Kreuter et al., 2010; McQueen et al., 2011), the use of intriguing stories to relay COVID-19 conspiracies (Agley & Xiao, 2021), proliferate anti-vaccine testimonies (e.g., Betsch et al., 2011; Haase et al., 2015), and get consumers interested in multi-level marketing schemes (Mattila, 2021) has led to undesirable outcomes. Additionally, Nabi and Green (2015) argued that when people desired an emotional shift, such as from fear to relief or sadness to happiness, they tended to consciously and subconsciously choose the information that would do so, and the information chosen was often in the form of stories because they were more emotionally engaging. These findings indicated that not only do the narratives people are exposed to play a role in their acceptance of information but also their choices in information. In addition to attributes and levels, prompt topics were carefully chosen.

It has been found to be difficult for people to leave their biases at the door when it comes to information. Research focusing on confirmation bias or selective exposure found people

tended to focus on, remember, and trust information that was consistent with existing beliefs over information inconsistent with existing beliefs (e.g., Stanley et al., 2020). This phenomenon has been especially present for 'hot topic' social and political beliefs such as abortion and vaccination (e.g., Čavojová et al., 2018; Vedejová et al., 2022). Having greater topic knowledge has also been linked to lower persuasion (e.g., Friestad & Wright, 1994) and differences in information processing and evaluating when compared to those with less topic knowledge (e.g., Lucassen et al., 2013). To combat the effects of topic knowledge and selective exposure and examine the effects of non-argument aspects of information (e.g., source expertise, information medium, and information structure) novel health and academic topics were used within the current study. While the theoretical groundwork has been set, several covariates were also accounted for due to their roles in the expected relationships.

Covariates

Self-esteem and Social Desirability

According to Tangney (2000), it has not been uncommon for humility to be mistaken for low self-esteem and high social desirability tendencies. These issues arose from those high in intellectual humility having an increased tendency to admit limitations in their knowledge and change their viewpoints, with these tendencies appearing to have been due to a lack of confidence in one's abilities (low self-esteem). Although intellectual humility may have appeared as low self-esteem, higher self-esteem predicted greater intellectual humility, indicating that intellectually humble people had a positive view of themselves (Bak & Kutnik, 2021). Additionally, because self-esteem is the belief in oneself, it was also possible that people could have had low self-efficacy in their abilities which manifested in ways that appeared to be due to low self-esteem. Thus, in the current study, intellectual humility and information self-efficacy

were expected to not equate with low self-esteem and predict study outcomes while controlling for self-esteem. In addition to self-esteem, social desirability tendencies were controlled.

Social desirability is the desire to present oneself favorably, which may contribute to bias in self-report responses (Kreitchmann et al., 2019; Vesely & Klockner, 2020). In the proposed study, it was expected that this desire could manifest itself in responding to the self-report surveys in a more socially desirable way and alter the predictive power of intellectual humility and self-efficacy. Additionally, several demographic variables that have been shown to influence the expected relationships were controlled to ensure examination of the intended relationships.

Sociodemographic and Academic Covariates

To ensure obtained results of the current study were interpreted correctly and the effects found were accurate, additional demographic factors were controlled. Sex, socioeconomic status, and age have been shown to influence information evaluations, persuasion processes, and health and academic outcomes. Regarding sex, females have been more likely to evaluate internet sources (Taylor & Dalal, 2017) but were also more likely to share misinformation online (Chen et al., 2015). Additionally, sex differences in health outcomes have shown that females were more likely to report poor health and negative physical symptoms (e.g., Anson et al., 1993) and males were less likely to report negative mental health symptoms (e.g., Afifi 2007). Socioeconomic status has also been found to influence information processing. Iversen and Kraft (2006) found less-educated women responded worse to health-focused messages when compared to more-educated women. Lower socioeconomic status was also associated with worse academic achievement (e.g., Destin et al., 2019; Liu et al., 2020), physical health (e.g., Booher, 2019; Cutler et al., 2020), and mental health (e.g., Finegan et al., 2018; Mossakowski, 2008; Yu & Williams, 1999). Age also played a role in information evaluation, with older individuals more likely to be persuaded by information (Phillips & Stanton, 2004). Additionally, age played a role

in health and academic outcomes, with older individuals tending to report more health issues and worse health behaviors (Racette et al., 2008) and students with higher student classifications (juniors and seniors) or who were non-traditional students having better academic outcomes (Vaez & Laflamme, 2008).

Additionally, the effects of academic specific variables were accounted for in the models predicting academic outcomes. Cumulative GPA, cumulative course credits completed, and semester course credits completed were included as covariates due to their expected relationships with semester GPA. Furthermore, as the target subject pool consisted highly of Freshman and Sophomore students, it was possible that participants may have transferred college credits. Therefore, participants were asked to provide GPA and credits completed of any transferred college credits.

Study overview

Research has established that people favor information that reinforces pre-existing beliefs, and social media has made it easier than ever for their choices to result in an echo chamber where they are routinely exposed only to information with which they agree. This study aimed to advance research by showing that ‘selective exposure’ does not just include the argument topic and stance but also includes other aspects of the information, such as the expertise of the author, the type of medium used, and whether the information is fact-based or story structure. Additionally, it attempted to provide evidence that the weight people placed on different aspects of the information to which they were exposed is associated with health and academic outcomes due to the expectation that their information preferences reflected the information choices they would have made in a ‘real-life’ choice scenario, and these choices were interrelated with (a) the sources with which they often surround themselves (information

behaviors), (b) their beliefs and behaviors regarding information finding and evaluating (information orientation), (c) the confidence they have in their ability to determine whether information is accurate (information self-efficacy), and (d) their willingness to admit their knowledge limitations and be open to other's knowledge (intellectual humility). Therefore, the proposed study had the following aims hypotheses:

1. Latent classes of information attribute preferences would be identified. It was expected that people would be categorized into classes based on their information choices and the attributes present in their choices. Specifically, it was expected that three latent classes would be identified (credibility-focused, engagement-focused, and accuracy-focused). For credibility-focused people, source expertise would have the highest utility rating of the attributes, with the expert source-level driving this utility (Clark, 2012; Eastin, 2001). Additionally, for this class, source medium would have the second-highest utility rating, with information medium levels that are considered reputable (e.g., academic sources and traditional news media sources) driving this utility. For engagement-focused people, information medium would have the highest utility rating with more entertaining mediums (e.g., social media sources not associated with traditional news sources and traditional news sources) driving this utility, and information structure would have the second-highest utility with the story-structured level driving this utility (e.g., Fan et al., 2021). For accuracy-focused people, information structure would have the highest utility and would be driven by the level that stated it included supporting facts and numbers (e.g., Vafeiadis & Xiao, 2021). Additionally, accuracy-focused people would have higher utility ratings for sources that are more often accurate (e.g., academic sources).

2. Information Predictors were expected to interrelate. Furthermore, it was possible self-efficacy may have had a quadratic relationship with intellectual humility with low self-efficacy being associated with both the ability to be swayed easily (high intellectual humility, e.g., Lucas et al., 2006, Saunders, 2012) and the tendency to stick with sources of information that are already known and trusted (low intellectual humility; e.g., Hua &Howell, 2022, Kurbanoglu et al., 2006). People with membership in the credibility-focused or accuracy-focused class, a history of using reputable sources (previous behaviors), higher information engagement and lower information apprehension (information orientation beliefs and behaviors), greater information self-efficacy, and higher intellectual humility were expected to have better health (higher physical and mental quality of life component scores and more physical health symptoms) and academic outcomes (higher semester GPA, better academic engagement, and a greater sense of school membership).
3. Additional exploratory analyses examined (1) the indirect effects of information behaviors, information orientation beliefs and behaviors, self-efficacy, and intellectual humility on health and academic outcomes through information attribute class membership (see Figure 5) and (2) intellectual humility moderating the relationships between class memberships, information orientation beliefs, and behaviors, information self-efficacy, and health and academic outcomes (see Figure 6).

Methods

Participants

Participants were recruited from The University of Texas at Arlington through the Department of Psychology Human Research Participant Pool (SONA). Undergraduate students

who completed the study received 0.5 course credits towards a class requirement. No additional compensation was provided. Eligible UTA participants must have been a) enrolled in the Human Research Participant Pool SONA system, b) be able to read, write and speak English, and c) be 17-25 years of age to participate. Students over the age of 25 were excluded from the current study due to wanting to focus on having a more traditional university undergraduate student sample. Before agreeing to participate in the study, participants were given the study title with a brief description of the study's purpose and expectations to allow self-select-out prior to participation.

Sample Size

The proposed study aimed to include 550 participants. This took into consideration 12% of participants who were expected to drop-out of the study (Hoerger, 2010) and 10-12% of careless responders (Meade & Craig, 2012) and provides 444 usable data points. These 444 data points were expected to be sufficient to achieve .8 power in a partial-mediation model ($\alpha = 0.24$, $\beta = 0.14$, $\tau' = 0.14$; See Appendix A), in addition to all other planned analyses.

Procedure

The current study was conducted as an online survey, through QuestionPro, with an average completion time of 32 minutes. In addition to a variety of self-report questionnaires, two full-profile discrete choice models were also used to present information attribute profiles to participants, asking them to choose their preference between three profiles. Each participant completed 20 choice tasks (10 for each topic) in which they were asked to indicate the information profile they would choose if "a close friend has been diagnosed with Duane Syndrome and you need to find out more about it" or "a close friend has notified you The Pastry War will be included on your exam, and you need to find out more about it" (see Figure 2). Discrete choice task topics were chosen to maximize novelty of the presented topics. Duane

Syndrome, an eye movement disorder present at birth, constitutes only approximately 1-5% of all eye movement disorders (e.g., Sarfraz & Ali, 2012). The Pastry War was a brief war that occurred between Mexico and France in 1838 (Barker, 1979). While both Duane Syndrome and The Pastry War are real topics, they are not expected to be known to the participants due to the rarity of the diagnosis and year and size of the war. The novelty of the topics was substantiated by asking the research team their familiarity with the topics. The choice to focus on novel topics instead of familiar topics (e.g., vaccination, abortion, and climate change) was based on the desire to examine how people's' information choices are influenced by non-argument aspects of information (e.g., source expertise, information medium, and information structure) instead of allowing participants to make their decisions based on previous biases about a familiar topic (Knobloch-Westerwick & Meng, 2009; Metzger et al., 2020). Three attention checks were included during the self-report survey to ensure attentivity and quality data, as recommended by Meade and Craig (2012). The order between discrete choice models, self-report predictor surveys, and health and academic outcome items were counterbalanced to combat order effects. Additionally, the discrete choice tasks were counterbalanced by topic (i.e., health and academic).

Information Attribute Profiles

As seen in Figure 2, each information profile included three attributes with various levels: source expertise (expert or non-expert), message medium (traditional news media, academic sources, direct verbal or written communication, online platforms not associated with traditional news media sources, and social media platforms not associated with traditional news media sources), and message structure (fact-based or story structure). Examples of message medium levels were provided as follows: traditional news media (e.g., newspaper, television news, radio, traditional news online platforms or direct communications, daily current event

updates), academic sources (e.g., journal articles, TED talks, conference presentations, textbooks) direct verbal or written communication (e.g., email, in-person discussion, phone call, text messaging) online platforms not associated with traditional news media sources (e.g., Wikipedia, Youtube, search engines, podcasts, daily current event updates), and social media platforms not associated with traditional news media (e.g., Facebook, Instagram, Twitter, Tik Tok, personal blogs, video blogs or vlogs).

Measures

Covariates

Sociodemographic Information. Participants were asked to provide sociodemographic information, including age, sex assigned at birth, gender identity, family income, difficulty paying bills, race and ethnicity, and current class standing (i.e., Freshman, Sophomore, Junior, Senior). Sex at birth and gender identity were both be requested for the current study. Sex assigned at birth had biological implications within this study as health outcomes were being assessed. Gender identity was also asked to provide descriptive information about the study's sample and ensure representativeness of the population. Difficulty paying bills and family income both acted as indicators of socioeconomic status with difficulty paying bills on a 4-point scale from 1 (very difficult) to 4 (not at all difficult) (Conklin et al., 2013). Additional sociodemographic information was obtained from UTA's University Analytics including financial aid data, household or personal income information, parent's education, first-generation college student status, class level (freshman, sophomore, junior, senior), race/ethnicity, age, and international/domestic student status.

Self-Esteem. The 10-item Rosenberg Self-esteem Scale (RSES; Rosenberg 1965) was used to measure participants' positive and negative feelings about themselves. Items included "On the whole, I am satisfied with myself" and "I feel I do not have much to be proud of." All

items were scored on a 4-point Likert scale with a range of 0 (“strongly agree”) to 3 (“strongly disagree”). After reverse scoring appropriate negatively worded items, a total score was calculated with a higher score indicating higher self-esteem. The scale has demonstrated strong internal reliability (α = .77) upon development (Rosenberg, 1965) and longitudinally over two weeks (α = .85 and .88; Sinclair et al., 2010). The measure was also internally reliable in the current study (α = .85)

Social Desirability. The Marlow-Crowne Social Desirability Scale Short Form was used to measure participants’ social desirability tendencies. This 13-item scale, developed by Reynolds in 1982 and adapted from the original 33-item Marlow-Crowne Social Desirability Scale (Crowne and Marlow, 1960), measured people’s’ concerns with being viewed in a positive light and their tendency to give answers that project a more socially desirable self-image. All items included a dichotomous true or false answer structure. After reverse scoring appropriate items, a total score was calculated. A high score indicated a tendency to respond in a socially desirable manner. This scale has demonstrated acceptable internal reliability both previously (α = .76; Reynolds, 1982) and in the current study (α = .67).

Predictors

Information Choices. To assess information choices, two discrete profile tasks were used. Each information profile included three attributes with various levels: source expertise (expert or non-expert), message medium (traditional news media, academic sources, direct verbal or written communication, online platforms not associated with traditional news media sources, and social media platforms not associated with traditional news media sources), and message structure (fact-based or story structure). Examples of message medium levels were provided as follows: traditional news media (e.g., newspaper, television news, radio, traditional news online

platforms or direct communications, daily current event updates), academic sources (e.g., journal articles, TED talks, conference presentations, textbooks) direct verbal or written communication (e.g., email, in-person discussion, phone call, text messaging) online platforms not associated with traditional news media sources (e.g., Wikipedia, Youtube, search engines, podcasts, daily current event updates), and social media platforms not associated with traditional news media (e.g., Facebook, Instagram, Twitter, Tik Tok, personal blogs, vlogs). Each participant completed 20 discrete choice tasks (10 for each topic) in which they were asked to indicate the information profile they would choose if "a close friend has been diagnosed with Duane Syndrome and you need to find out more about it" or "a close friend has notified you The Pastry War will be included on your exam, and you need to find out more about it"

Intellectual Humility. The Comprehensive Intellectual Humility Scale is a 22-item scale developed by Krumrei-Mancuso and Rouse (2016) and measures people's' acknowledgment of their own knowledge, knowledge limitations, and openness to new information. All items were rated on a 5-point Likert scale from 1 ("strongly disagree) to 5 ("strongly agree"). The scale included four subscales measuring independence of intellect and ego, openness to revising one's viewpoint, respect for others' viewpoints, and lack of intellectual overconfidence. Development of the scale indicated a high degree of internal consistency ($\alpha = .85$) for the full scale and acceptable to strong for each subscale ($\alpha = .72$-$.87$). A total score was calculated and used for analyses. The Comprehensive Intellectual Humility Scale was proven to be an internally reliable scale with a Cronbach's alpha value of .84 in the current study.

Information Behaviors and Beliefs. To measure information beliefs and previous information behaviors, the Health Information Orientation Scale (HIOS; DuBenske et al., 2009) was adapted for use with both health and academic information orientation. Health orientation

included the prompt “when I am dealing with health information,” and academic orientation included the prompt “when I am dealing with educational information.” Each item was rated on a 5-point Likert scale from 0 (not at all true) to 4 (very much true), resulting in two subscales with four items each (academic information engagement, $\alpha = .64$; academic information apprehension, $\alpha = .62$; health information engagement, $\alpha = .61$; and health information apprehension, $\alpha = .65$). Each subscale was calculated as a mean score of the subscale’s items. Information engagement refers to the extent to which people seek out information, whereas information apprehension is the extent people avoid information in order to maintain current beliefs. A higher score on information engagement and a lower score on information apprehension indicated greater beliefs about the importance of evaluating information. A self-report measure of information usage was used to measure recent consumption of various information mediums. This measure, adapted from measures used by Wei (2014) and Ali et al. (2020), asked participants to report how frequently, in the past two weeks, they used various types of sources of information on a 5-point Likert scale from 0 (never) to 4 (very likely) The types of sources used in this measure included traditional news, academic sources, direct or verbal communication, online platforms not associated with traditional news sources, and social media not associated with traditional news sources. Participants were also asked to report how likely they were to “read physical information from your physician about a new diagnosis,” “read physical information from your pharmacist about a new medication,” “look up information online about a new diagnosis,” and “look up information online about a new medication.” Additionally, to examine behaviors relevant to the information topics presented, participants were asked a series of questions. First as a manipulation check, the participants indicated whether they had any previous knowledge about Duane Syndrome or The Pastry War. Next, the

participants indicated whether they had looked up information about either topic during the study, how likely they were to look up information about either topic after the study, and how likely they were to mention or discuss either topic with family or friends after the study. Looking up information on either topic during the study was examined in exploratory analyses as a behavioral outcome predicted by the information choice classes and predictors.

Information Self-Efficacy. To measure information self-efficacy, the proposed study adapted a 5-item subscale from the Information Competency Scale used by Song & Kwon (2012) to measure participants' self-reported sense of competency in evaluating information. This was done by asking participants to rate their confidence in their ability to do things such as "determine the nature and extent of the information I need" and "evaluate information and its sources critically" on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Previous use of the original information evaluation subscale reported Cronbach's alpha of 0.87 (Song & Kwon, 2012) and the current study found a similar alpha ($\alpha = .89$) indicating the scale was internally reliable.

Outcomes

Physical and Mental Health. Physical and mental health components of quality of life were measured using the 36-item Medical Outcome Study Short-Form Health Survey (MOS SF-36). This survey was developed by the RAND Corporation and included items in yes/no and Likert scale (3-point to 6-point) formats. Eight subscales were included: physical functioning, role limitations due to physical health, role limitations due to emotional health, energy/fatigue, emotional well-being, social functioning, pain, and general health (Ware & Sherbourne, 1992) and were combined to create two scores, a physical component, and a mental component. Both component scores had previously shown high reliability, from .90 to .92 for the physical health

component and .91 to .94 for the mental component (Revicki et al., 1998). Higher scores on the physical component indicated better physical well-being, and high scores on the mental component indicated better socioemotional well-being. Additionally, the Cohen-Hoberman Inventory of Physical Symptoms (CHIPS; Cohen & Hoberman, 1983) was used to measure physical symptoms and used as an indicator of physical health. This scale included a list of 33 physical symptoms with participants rating, on a 5-point Likert scale, how much each symptom bothered them in the past two weeks ranging from 0 (not been bothered by the problem) to 4 (extremely bothered by the problem). A total score was created by summing up the scores from all symptoms, with a greater score indicating worse physical symptoms and physical health. Previous use of the CHIPS scale showed good internal consistency (.88-.92; Cohen & Hoberman, 1983; Xing et al., 2019). The CHIPS scale also showed good internal reliability in the current study ($\alpha = .93$).

Academic Measures. Academic outcome items for the proposed study included semester GPA, student engagement, and sense of school membership. Additionally, cumulative GPA, transfer GPA, the number of semester credit hours completed, the number of cumulative credit hours completed, and the number of transfer credits completed were obtained to use as covariates. All items were obtained through self-report. Participants were also asked to provide consent for the obtainment of semester GPA, cumulative GPA, semester credit hours completed, and cumulative credit hours completed from the University Analytic Department. Student engagement was measured using the University Student Engagement Inventory (USEI; Maroco et al., 2016). This 15-item scale included three dimensions (behavioral, $\alpha = .64$; emotional, $\alpha = .80$; and cognitive engagement, $\alpha = .77$), with all items rated on a 5-point Likert scale from 0 (never) to 4 (always). Higher scores on all dimensions indicated better student engagement. The

Psychological Student Sense of Membership scale (PSSM; Goodenow, 1993) was used as an indicator of students' feelings of belonging to their school. This scale included 18 items rated on a 5-point Likert scale from 1 (not at all true) to 5 (completely true). All items were summed with higher scores indicating a greater sense of school membership. Reliability of this scale has been demonstrated with Cronbach's alphas from .77 to .88 for multiple student groups and was confirmed by the current study ($\alpha = .87$)

Attention Checks

Three attention checks were used for the proposed study. These three items gave participants the following prompts "It is important for you to pay attention during this study, please select 'strongly disagree'", "Please select 'yellow' from the options below", and "Which of the following rhymes with the word 'book'?". Only participants who appropriately answered all three attention checks had their data included in the subsequent analyses.

Statistical Analyses

Hypothesis 1 (displayed in Figure 3)

Information attribute classes were identified through a latent class analysis. It was expected that people would be categorized into classes based on their information choices and the attributes present in their choices. Specifically, it was expected that three latent classes would be identified (credibility-focused, engagement-focused, and accuracy-focused). For credibility-focused people, source expertise would have the highest utility rating of the attributes, with the expert-source level driving this utility. Additionally, for this class, source medium would have the second-highest utility rating, with information medium levels that are considered reputable (e.g., academic sources and traditional news media sources) driving this utility. For engagement-focused people, information medium would have the highest utility rating with more entertaining

mediums (e.g., social media sources not associated with traditional news sources and traditional news sources) driving this utility, and information structure would have the second-highest utility with the story-structured level driving this utility. For accuracy-focused people, information structure would have the highest utility and would be driven by the level that states it includes supporting evidence. Additionally, accuracy-focused individuals would have higher utility ratings for sources that are more often accurate (e.g., academic sources).

To identify these classes, a latent class multinomial logit analysis was performed on the discrete choice output. To perform latent class analysis, a sequence of models was run, starting with one class and continuing until the best fitting model was identified. A lack of improvement in the log-likelihood value indicated when the convergence limit had been met, and the best fitting model had already been analyzed. To determine the model of best fit, various fit statistics were compared, including the Bayesian Information Criterion (BIC) and Akaike Information Criterion (AIC). Lower BIC and AIC values indicated better model fit (Weller et al., 2020). Additionally, because both health and academic topics were included in the study, it was examined whether class membership varied based on the topic using the Chi-Square Test of Independence. All subsequent analyses were conducted with the appropriate class membership. For example, all academic outcomes included the class membership determined by asking participants their information profile choices (discrete choice tasks) with the academic topic prompt.

Hypothesis 2 (displayed in Figure 4)

It was expected information predictor variables would interrelate. To examine this all zero-order and quadratic relationships between information predictors were examined. Quadratic relationships were included due to the possible relationships between intellectual humility and

self-efficacy. People with a history of using reputable sources (previous behaviors), having membership in the credibility or accuracy-focused class, higher information engagement and lower information apprehension (previous beliefs), greater information self-efficacy, and higher intellectual humility would have better health (higher physical and mental quality of life component scores and more physical health symptoms) and academic outcomes (higher semester GPA, better academic engagement, and a greater sense of school membership). To test this hypothesis, eight hierarchical multiple regression models were conducted. All models included information attribute class membership, previous information behaviors, information orientation beliefs and behaviors, information self-efficacy, and intellectual humility as predictors. As the study includes separate discrete choice and information orientation items for both an academic and health topic, regressions with health outcomes included the items corresponding to the health topic, and those with academic outcomes included those corresponding to the academic topic.

The outcomes for each model were as follows: semester GPA, behavioral engagement, cognitive engagement, social engagement, sense of school membership, physical health quality of life, mental health quality of life, and physical health symptoms. Socioeconomic status (family income and ability to pay bills), sex, self-esteem, social desirability, age, and student classification were included in the first step of each regression as covariates. Academic outcome regressions also included cumulative GPA, transfer GPA, semester completed credits, and cumulative completed credits as covariates within the first step. The second step of each regression included predictor variables (attribute class membership, information behaviors, information orientation beliefs and behaviors, information self-efficacy, and intellectual humility). Additional exploratory analyses examined whether participants looked up information

about the topics during the study as outcomes. As search behaviors during the study were binary, logistic regressions were used but included the same steps as the previous regression models.

Additional Exploratory Analyses (displayed in Figures 5 and 6)

Multinomial logit and multiple regression models were used to further explore the collected data. Specifically, models examined further will included (1) indirect effects of information behaviors, information orientation beliefs and behaviors, self-efficacy, and intellectual humility on health and academic outcomes through information attribute class membership(see Figure 5) and (2) intellectual humility moderating the relationships between class membership, information orientation beliefs and behaviors, information behaviors, information self-efficacy, and health and academic outcomes (see Figure 6).

Results

Sample Descriptive Statistics

A total of 807 responses were obtained. After removing duplicate responses (n = 84), responses having substantial missing data (>5% of survey items; n = 140), and those who did not pass all three attention checks (n = 86), a total of 497 people had valid data usable for analysis. Consent to obtain University Analytics data was given by 409 participants with 91 preferring not to give access to this data. The sample was ethnically diverse, and most participants were female, freshman, and between the ages of 17 and 22 (Table 1). Furthermore, the sample revealed a range of family income levels, with the majority falling within the $20,00 to $69,999 ranges (Table 1). In terms of difficulty paying bills, most participants reported experiencing at least some difficulty, with a significant portion having reported experiencing at least some difficulty, while a notable proportion expressed relatively lower levels of difficulty (Table 2). Additionally, within the sample, the average semester GPA was in the range of a B+ grade, indicating strong

academic performance. Furthermore, the average number of credits taken during the semester fell just short of 14 hours, suggesting that the participants had a full-time academic load (Table 2)

Examination of skewness values, box plots, and histograms of all continuous measures revealed that information competency, health information engagement, academic information engagement, cumulative GPA, semester GPA, semester credits, cumulative credits, physical quality of life, and behavioral student engagement were all negatively skewed and were transformed by either squaring or cubing, and the transformation that best reduced skewness and increased normality was chosen. Additionally, cumulative credits and physical symptoms were positively skewed and were transformed by a square root transformation. Furthermore, multicollinearity issues were discovered between cumulative GPA, cumulative credits earned, transfer GPA, and student classification. Cumulative GPA transfer GPA, and cumulative credits earned were removed from the analyses due to these issues and because student classification had the most valid data points.

To ensure participants did not have any previous knowledge about Duane Syndrome or the Pastry War, participants were asked to report whether they had any previous knowledge about either topic. Most participants reported having no prior knowledge of the topics (Table 1). However, to examine the influence of prior knowledge on participant preferences and decision-making, latent class analyses were initially conducted including participants with prior knowledge. The results of the analyses revealed that prior knowledge of Duane Syndrome significantly predicted the health latent classes ($p < 0.05$), indicating that participants with prior knowledge had differing preferred attributes when selecting profiles. This was also supported when the most chosen attributes changed for the classes once those with prior knowledge were

removed (Appendix A). These findings underscored the importance of considering prior knowledge as a potential confounding factor in the analyses. To address this potential bias and ensure the manipulation of profile attributes (author, medium, and structure) was more impactful and unbiased, participants who reported having prior knowledge of either topic were excluded from further analyses. This exclusion aimed to maintain consistency in the experimental conditions, as participants with pre-existing knowledge might have different decision-making processes or preferences that could confound the effects of the manipulated attributes.

Aim 1: Latent Classes based on Information Attribute Preferences

A latent class multinomial logit analysis was performed in R using the LogisticRegression function from the 'scikit-learn' package. on the discrete choice output for both health and academic topics to determine whether individuals would be categorized into classes based on the attributes present in their information choices. Specifically, it was expected the best fitting model would include three latent classes: the credibility-focused class preferring expert authors and reputable sources, the engagement-focused class preferring entertaining mediums such as social media and story structure, and the accuracy-focused class preferring facts and numbers and reputable sources. The multinomial logit model which was used to predict the probability of choosing a particular profile based on the author, medium, and structure attributes, for both health and academic topics, achieved an accuracy of 0.70 and a log loss of 0.57, indicating the model correctly predicted the outcome in 70% of cases, and on average, the models' predicted probabilities were off by 0.57. To determine the best fitting latent class model, a sequence of models, from one class to five classes, were conducted, and an investigation of the log-likelihood values, silhouette scores, Bayesian Information Criterion (BIC), and Akaike Information Criterion (AIC) revealed two classes were the best fit for both the health and

academic topics. As can be seen in Table 3 and the corresponding elbow plots in Figures 7 and 8, two classes had the best fit for the health topic as indicated by a lack of increase in log-likelihood values between two classes and three classes. Additionally, when comparing two versus three classes, two classes had lower BIC and AIC values, indicating a better fit. For the academic topic, two classes also had the best fit indicated by a lack of an increase in log-likelihood values and relatively lower BIC and AIC values.

In addition to identifying latent classes, an examination of attribute importance scores was conducted to assess the preferences of the participants within the overall sample (Table 4). Regarding the health topic, the author attribute played a substantial role in participants' selection of information profiles, with the layman author being the most preferred choice. The medium attribute also had a noticeable impact on participants' decisions with participants favoring academic sources. In contrast, the structure attribute had a minimal influence on participants' preferences with "facts and numbers" being the most preferred option. When considering the academic topic, both the author and medium attributes had significant effects on participants' choices. The preference for experts as authors accounted for a substantial portion of the decisions, closely followed by the influence of online sources as the preferred medium. Additionally, the inclusion of "facts and numbers" in the profiles had a moderate impact, contributing to participants' decision-making to a lesser extent.

To identify whether membership within the health topic latent classes and academic topic latent classes exhibited a statistically significant association, a Chi-square test was used and determined the latent class memberships were independent of one another ($\chi 2 = 1.05$, $p = 0.30$). Further examination revealed, the latent class variables shared 50.8% of cases and did not share 49.2% of cases. Furthermore, because attribute importance was different between topics, the

membership variable used (health latent class membership and academic latent class membership) was that which corresponded to the topic being analyzed. In other words, academic latent class membership was used for all analyses involving the academic topic whereas health latent class membership was used for those focusing on the health topic.

To fully understand how the profile attributes influenced participants' decision-making, an analysis of attribute importance scores was conducted for each identified latent class (Table 3 and Figure 9). For the health topic, the author emerged as the most influential factor for both latent classes. However, Class 1 displayed a stronger preference for the layman author, while Class 2 leaned more towards the expert author. Similarly, the medium attribute had a significant impact on the decisions of both classes, with Class 1 favoring academic sources and Class 2 preferring social media sources. Notably, neither class attributed considerable importance to the structure of the argument when making profiles choices. However, Class 1 tended to choose the statistical structure more frequently, whereas Class 2 showed a preference for the personal story structure.

When considering the academic topic, Class 1 placed the highest importance on the author attribute and chose the layman author most often. Additionally, this class displayed a preference for online mediums, although the influence was slightly less pronounced compared to the author attribute. The structure attribute held relatively less significance for Class 1, but there was a preference for the statistical format. In contrast, Class 2 placed similar importance on the author and medium attributes, favoring the expert author and social media sources. This class attributed relatively less importance to the structure attribute, with a preference for the story structure. Notably, the importance of the structure attribute for Class 2 was twice that of Class 1, suggesting a greater consideration of information structure within this class.

To better identify and label these latent classes, they were named based on their preferred attributes. The latent class for the health topic, which favored the layman author and academic medium (Class 1), was termed the “Clarity-Accuracy Focused” class, highlighting the importance of clear and but accurate information. The latent class favoring the expert author and social media (Class 2) was labeled the “Credibility-Accessibility Focused” class, emphasizing the importance of credibility and accessibility. Similarly, for the academic topic, the class valuing the layman author and online mediums (Class 1) was termed the “Clarity-Accessibility Focused” class, while the class preferring the expert author and social media sources was designated the “Credibility-Accessibility-Story Focused” class, highlighting their emphasis on credibility, accessibility, and entertaining structures.

Aim 2: Variable Interrelationships and Predictive Model

Variable Interrelationships

To identify whether and how information predictors, covariates, and outcomes were significantly interrelated, all zero order correlations were examined (Table 5 and 6). Additionally, quadratic relationships between all predictors and outcomes were conducted (Table 7). Having greater self-esteem was found to be associated with having less social desirability, more difficulty paying bills, having less information competency, being more apprehensive towards health and academic information, being less engaging with academic information, less use of direct sources, a better physical quality of life, a worse mental quality of life, having more physical symptoms, being less behaviorally, emotionally, and cognitively engaged, and having a low sense of school membership. Having greater social desirability was also found to be associated with being more intellectually humble, engaging more with academic information, being less apprehensive towards academic and health information, using social media as an

information source less often, worse physical qualify of life, a better mental quality of life, fewer physical symptoms, having more behavioral, cognitive, and emotional academic engagement, having a greater sense of school membership, and searching for information regarding the health and academic topic during the study. Being of older age was associated with being born a male, using direct sources less often, having fewer physical symptoms, having a better physical qualify of life, having a higher semester GPA, and having higher behavioral and cognitive engagement. Being male was also associated with greater engagement with academic information, a worse mental quality of life, more physical symptoms, having a lower semester GPA, having lower levels of behavioral and cognitive engagement, and searching for information regarding the academic topic during the study. Having more difficulty paying bills was also associated with a higher student classification, more engagement with academic information, a worse mental quality of life, more physical symptoms, a lower semester GPA, lower behavioral and cognitive engagement**,** and searching for information regarding the academic topic during the study. Having a higher student classification was also found to be related to taking fewer semester credits, having more information competency, and engaging more with and being less apprehensive about health information.

Additionally, information predictors were found to interrelate with one another and outcome variables. Specifically, being more intellectually humble was associated with being more confident in their competency with information, engaging more with and being less apprehensive towards health and academic information, using academic and direct sources more often, having a better physical quality of life, being more behaviorally, emotionally, and cognitively engaged, and having a greater sense of school membership. Having more confidence in information skills was related to being more engaged and less apprehensive towards health

and academic information, using news, academic, and direct sources more often, having a better physical quality of life, obtaining a higher semester GPA, having better behavioral, emotional, and cognitive engagement, and having a better sense of school membership. Engaging more with academic information was found to be correlated with engaging more with health information, using academic and direct sources more often, having better behavioral, emotional, and cognitive engagement, earning a higher semester GPA, and having a better sense of belonging to their school. Being more engaged with health information also had these same relationships with using academic and direct sources more often, having better behavioral, emotional, and cognitive engagement, and feeling a better sense of belonging to their school, but was also related to being less apprehensive towards health information and having a better physical quality of life. Being apprehensive towards academic engagement was associated with being less engaging and more apprehensive towards health information, using social media as an information source, having a worse mental quality of life, having more physical symptoms, being less emotionally and cognitively engaged, and having a lower sense of school membership. Being apprehensive towards health information was also related to using social media as an information source more often, having a worse mental quality of life and more physical symptoms, and having worse behavioral, emotional, and cognitive engagement, and sense of school membership. Using news sources more often was associated with also using academic sources more often, having a worse physical quality of life, and higher cognitive engagement. Using academic sources was associated with using more direct and online sources, using social media less often for information, having a higher semester GPA, and being more behaviorally, emotionally, and cognitively engaged. Using direct and online sources were positively related with one another and using social media more often. Furthermore, using direct sources was associated with better

cognitive engagement and sense of school membership whereas using online sources was associated with a better semester GPA. Using social media sources more often was also associated with having more physical symptoms.

The interrelationships between outcomes were also identified to gain a comprehensive understanding of the complex dynamics and interplay among health and academic outcomes. Having a better physical quality of life was associated with having a worse mental quality of life, having fewer physical symptoms, and being more cognitively engaging in school. Having a better mental quality of life was associated with having fewer physical symptoms, being more behaviorally, emotionally, and cognitively engaged in school, and having a greater sense of school membership. Having more physical symptoms was related to having a lower semester GPA, worse behavioral and emotional engagement, and having a worse sense of school membership. Having more behavioral, emotional, and cognitive engagement were all positively interrelated with one another and were associated with a better sense of school membership. Having more behavioral engagement was also associated with having a higher semester GPA and searching for health information during the study was associated with also searching for academic information during the study.

Investigation into the relationships between latent class membership and covariates, predictors, and outcomes was completed. Results showed that only being apprehensive towards academic information was associated with being a member of the Credibility-Accessibility-Story Focused class which preferred experts and social media.

To ensure the characterization of the relationships between predictor and outcome variables were accurate, in terms of their shape, quadratic curve fitting analyses were conducted. This involved comparing the fit of zero-order correlations to quadratic correlations, aiming to

find the best curve that described the set of data points. These analyses provided a deeper understanding of the overall trend and relationships within the data, allowing for the identification of curved relationships between variables rather than just straight lines. Further examination using the two-line method was done to confirm the expected quadratic relationships.

Several of the tested relationships were found to be quadratic. Specifically, an increase in intellectual humility showed a small initial decrease in cognitive engagement, followed by a significant and notable increase as intellectual humility continued to rise. Information competency exhibited a quadratic relationship with sense of school membership, with a slight upward trend as information competency increased. However, once the information competency scores exceeded slightly above the mean, sense of school membership started to decline. Online source use displayed a quadratic relationship with emotional engagement. From ‘never’ to ‘sometimes’ usage of online sources, emotional engagement dipped slightly, but as online source use increased from ‘sometimes’ to ‘always’, emotional engagement experienced a significant increase. Similar relationships were found between social media use and emotional engagement, sense of school membership, and mental quality of life. From ‘never’ to ‘sometimes’ usage of social media, these variables exhibited a slight decrease, while an increase in usage from ‘sometimes’ to ‘always’ resulted in a substantial improvement in emotional engagement, sense of school membership and mental quality of life. While it was believed that these relationships would follow a linear trend, the observed patterns demonstrated non-linear associations. The unexpected presence of these quadratic relationships indicates a higher level of complexity in the dynamics among the variables being investigated than initially hypothesized. These findings highlight the importance of considering non-linear effects and indicate that the relationships between intellectual humility, information competency, online source use, social media source

use, and various outcomes are characterized by intricate patterns. Due to these complex relationships found between predictors and outcomes, all analyses included both zero order and relevant quadratic terms, allowing for the examination of non-linear relationships between variables within the predictive models.

Predictive Models

A series of hierarchical multiple regression models were conducted to determine whether information predictors, latent class membership, and covariates predicted health and academic outcomes (Table 8 through Table 19). Specifically, it was tested whether being more intellectually humble, more confident in evaluating information, engaging more with health and academic information, being less apprehensive towards information, and being a member of a specific latent class, predicted better health and academic outcomes. Additionally, it was expected that using academic and direct sources more often would predict better health and academic outcomes, while using online and social media sources more often would predict worse health and academic outcomes. Contrary to expectations, latent class membership did not predict any health or academic outcomes. However, meaningful relationships were found for other predictors.

Information Predictors on GPA. A hierarchical multiple regression was used to test if being more intellectually humble, having more confidence in their competency with information engaging more with academic information, and using academic and online sources more often, predicted better GPA, while controlling for covariates. Additionally, being more apprehensive towards academic information and using social media and online sources more often was expected to predict worse GPA. In the first covariates only model, sex at birth, family income, and student classification positively predicted and age negatively predicted semester GPA.

Adding information predictors to the model accounted for additional variance. As expected, using academic sources more often was associated with a higher semester GPA, but unexpectedly, using direct sources more often predicted worse GPA and using online sources predicted better GPA. These findings provide partial support for the hypothesis.

Information Predictors on Student Engagement Subscales. A hierarchical multiple regression was used to test if being more intellectually humble, being more confident in one's information evaluation skills, engaging more with academic information and being less apprehensive towards academic information would predict better student engagement. Additionally, it was expected that using academic and direct sources would predict higher levels of engagement (behavioral, cognitive, and emotional), while using online and social media sources more often would predict lower levels of engagement. The covariate only models showed self-esteem negatively predicted behavioral engagement, cognitive engagement, and emotional engagement, social desirability positively predicted behavioral and emotional engagement, family income's linear term positively predicted behavioral engagement and family income's quadratic term positively predicted cognitive engagement. Adding information predictors to the models showed that, as expected, having more confidence in your information competency, and using academic sources more often predicted better behavioral and cognitive engagement. Being more engaged with academic information was also associated with better cognitive engagement. Notably, the quadratic term for social media use exhibited a positive association with emotional engagement, indicating a U-shaped relationship. Specifically, moderate levels of social media use were associated with higher levels of emotional engagement, while both lower and higher levels of social media use were linked to lower levels of emotional engagement. Given these findings, the hypothesis was partially supported.

Information Predictors on Sense of School Membership. A hierarchical multiple regression was used to test if being more intellectually humble, being more confident in one's competency with information, engaging more with academic information and being less apprehensive towards academic information would predict a greater sense of school membership. Additionally, it was expected that using academic and direct sources more often would predict a greater sense of school membership while using online and social media sources more often would predict weaker feelings of school membership. The initial model, which included only covariates, revealed that self-esteem and age negatively predicted school membership. Upon adding the information predictors to the model, additional variance was accounted for. Notably, both the linear and quadratic terms for information competency emerged as significant predictors of school membership. The linear term positively predicted school membership, suggesting that as information competency increased, feelings of school membership also increased. However, the quadratic term negatively predicted school membership, indicating that as information competency continued to increase, feelings of school membership eventually reached a peak and began to decrease. Additionally, greater engagement with academic information and intellectual humility levels predicted a better sense of school membership, partially supporting our hypothesis.

Information Predictors on Physical Quality of Life. A hierarchical multiple regression was used to test if being more intellectually humble, being more confident in one's information evaluation skills, engaging more with health information and being less apprehensive towards health information would predict a better physical quality of life. Additionally, it was expected that using academic and direct sources more often would predict a better physical quality of life, while using online and social media sources more often would predict a worse quality of life.

The covariate only model did not show any significant predictors of physical quality of life, however, adding information predictors did increase the amount of variance accounted for. Specifically, it was found that being more engaged with health information and being more intellectually humble predicted a better physical quality of life, partially supporting the hypothesis.

Information Predictors on Mental Quality of Life. A hierarchical multiple regression was used to test if being more intellectually humble, being more confident in one's information evaluation skills, engaging more with health information and being less apprehensive towards health information would predict a better mental quality of life. Additionally, it was expected that using academic and direct sources more often would predict a better mental quality of life, while using online and social media sources more often would predict a worse quality of life. The first model, containing only covariates, showed self-esteem, age, and difficulty paying bills negatively predicted and social desirability and sex at birth positively predicted mental quality of life. Adding information predictors to the model did not increase the amount of variance explained and no information predictors were found to predict mental quality of life, not supporting the hypothesis.

Information Predictors on Physical Symptoms. A hierarchical multiple regression was used to test if being more intellectually humble, being more confident in one's information evaluation skills, engaging more with health information and being less apprehensive towards health information would predict fewer physical symptoms. Additionally, it was expected that using academic and direct sources more often would predict fewer symptoms, while using online and social media sources more often would predict more symptoms. The covariate only model showed self-esteem and difficulty paying bills positively predicted and sex at birth negatively

predicted physical symptoms. Adding the information predictors to the model did not explain additional variance but did indicate using news sources more often may have been associated with having more physical symptoms. These findings do not support the hypothesis.

Information Predictors on During Study Search Behaviors. A hierarchical multiple regression was used to test if being less intellectually humble, being less confident in one's information evaluation skills, engaging less with information and being more apprehensive towards information would predict people using search behaviors during the study. Additionally, it was expected that using academic and direct sources more often would predict not searching for information during the study while using online and social media sources more often would predict searching for information during the study. Results of search behaviors for the health topic showed only having more social desirability predicted searching for information regarding the health topic during the study. The covariates only model for academic search behaviors found having more self-esteem, social desirability, and semester credits completed predicted searching for information, while being older predicted not searching for information during the study. Adding information predictors to the model explained additional variance. Specifically, having more apprehension towards academic information and being within the academic Clarity-Accessibility Focused class predicted searching for information about the academic topic during the study, partially supporting the hypothesis.

Aim 3: Exploratory Analyses.

Multiple series of hierarchical logistic and linear regressions were conducted to test the following: (1) the indirect effects of information predictors on health and academic outcomes through the information class membership to determine whether being a member of a specific class explained the relationships between information predictors, health and academic outcomes,

and during study search behaviors; (2) the impact of information class membership on, and its role as a moderator of, the effects of information predictors on health and academic outcomes, as well as search behaviors during the study; and (3) the moderation effects of intellectual humility on the relationships between information predictors, health and academic outcomes, and search behaviors during the study, indicating that the effects of information predictors on the outcomes depends on the level of intellectual humility. For these analyses, non-significant covariates and all quadratic terms were removed from the exploratory models due to limited statistical power resulting from a large number of variables and the limited sample size.

Information Class Membership Mediation. As mentioned above, a series of hierarchical logistic regressions were conducted to test if being a member of a specific information class explained the relationship between information predictors and health and academic outcomes and search behaviors during the study. As seen in Table 6 and 7, neither covariates by themselves nor adding information predictors accounted for a significant amount of variance, indicating the information predictors did not predict class membership. Furthermore, the previous predictive models did not find class memberships to predict any of the outcomes. Thus, it was not appropriate to test whether class membership mediated these relationships as the relationships between the information predictors, outcomes, and class membership are required to be significant prior to mediation testing.

Information Class Membership Moderation. As it was determined information predictors did not predict class membership, a series of hierarchical regression models were used to determine if information class membership influenced the relationships between information predictors and health and academic outcomes. Results of these models indicated information class membership may have moderated the following relationships: information competency

predicting semester GPA, news use predicting semester GPA, social media use predicting behavioral student engagement, direct source use predicting cognitive student engagement, news use, academic use, and direct use predicting emotional student engagement, and intellectual humility predicting sense of school membership. To verify the presence of moderation effects of information class membership, the PROCESS macro was used (Hayes, 2017). Information class membership was found to moderate social media use predicting behavioral student engagement, direct source use predicting cognitive student engagement, direct source use predicting emotional student engagement, academic source use predicting emotional student engagement, and intellectual humility predicting sense of school membership.

For social media use predicting behavioral engagement, within the Clarity-Accessibility Focused academic class who preferred layman and online sources for their academic information, using social media more often was associated with being more behaviorally engaged while it predicted worse behavioral engagement within the Credibility-Accessibility-Story Focused class (Figure 10). Similarly for direct source use predicting cognitive engagement and academic source use predicting emotional engagement, within the academic Clarity-Accessibility Focused class using direct sources predicted better cognitive engagement and using academic sources more often predicted better emotional engagement (Figures 11 and 12). However, these relationships were not significant for the Credibility-Accessibility-Story Focused class. For direct source use predicting emotional engagement, within the Credibility-Accessibility-Story Focused academic class, using direct sources predicted worse emotional student engagement (Figure 13). However, this relationship was not significant within the Clarity-Accessibility Focused academic class. In addition to the latent class's moderation effects on the relationships between information source use and academic outcomes, a moderation effect

was also found between intellectual humility and sense of school membership (Figure 14). Specifically, for the Clarity-Accessibility Focused class, being more intellectually humble predicted having a better sense of school membership. However, this relationship was not significant for those within the Credibility-Accessibility-Story Focused class.

Intellectual Humility Moderation. To determine if intellectual humility influenced the relationships between information predictors and health and academic outcomes, a series of hierarchical linear regressions were conducted. The first model of each regression included just covariates, information predictors were added in the second step, and interaction terms for each information predictor by intellectual humility were included in the third step. There were no possible moderating effects found for behavioral, emotional, and cognitive engagement, physical quality of life, and mental quality of life. For GPA, it was found that intellectual humility may have moderated its relationship with academic information engagement (Table 20). For sense of school membership, intellectual humility may have moderated its relationships with information competency (Table 24). For physical symptoms, intellectual humility may have moderated the relationship between being apprehensive towards health information and physical symptoms (Table 27). Intellectual Humility may have also played a moderating role in the relationships between online source use and searching for information about the academic topic during the study, as well as between being apprehensive towards information and searching for information about the health topic during the study. Additionally, Intellectual Humility may have moderated the associations between using direct sources and searching for health information. To further verify the presence of a moderation effect, the PROCESS macro was used and Johnson-Neyman plots were developed to display any significant interactions (Hayes, 2017). This probe resulted in intellectual humility moderating three relationships, between information competency and sense

of school membership, information apprehension and physical symptoms, and online source use and searching for information about the academic topic during the study. Specifically, it appeared that at lower levels of intellectual humility, having more confidence in information skills predicted a better sense of school membership but at high levels of intellectual humility this relationship was no longer significant. However, the PROCESS results exhibited unusual findings, characterized by very small effect sizes and standard errors. It was suspected that this outcome arose due to a non-linear or quadratic relationship between information competency and perceived sense of school membership, as previously identified. Unfortunately, the limited sample size and inadequate statistical power prevented the inclusion of quadratic terms in the moderation regression. At low levels of intellectual humility, it was also found that being more apprehensive towards health information predicted more physical symptoms, but as intellectual humility increased this relationship became more negative and less significant (Figure 15). Additionally, at low levels of intellectual humility, using direct sources more often was associated with not searching for information during the study (Figure 15). At mid-levels of intellectual humility, there was no association between using direct sources and searching for information. However, at high levels of intellectual humility, using direct sources more often was associated with searching for information during the study.

Discussion

As the scope and scale of the Information Crisis continues to expand, this study addressed gaps in the existing literature by combining various self-report aspects of information use and by using choice-based models to better understand how people make decisions regarding information acquisition and consumption and how these choices may ultimately impact individuals' academic and health. Additionally, this study explored lesser known, real-world

topics to examine how different aspects of information, such as the author, medium, and structure, impact decision-making, while minimizing the influence of personal biases and beliefs on participant choices. Three aims were developed and tested in this study. Firstly, the categorization of individuals into latent classes based on their information choices and attributes was partially supported. Although the sample was divided into two classes instead of the hypothesized three, the classes were similar in the importance they placed on the attributes and differed most substantially by which levels they preferred. Secondly, the prediction of health and academic outcomes by information predictors was partially supported. Factors such as confidence in information skills, engagement with information, lower apprehension, higher intellectual humility, more frequent use of academic and direct sources, and less frequent use of online and social media sources were expected to predict better outcomes. While various information predictors demonstrated associations with outcomes, not all predictors consistently predicted all outcomes, and some relationships exhibited unexpected directions. For instance, contrary to expectations, using online sources more often was associated with a higher semester GPA. Lastly, the exploration of different models and the roles of intellectual humility levels and latent classes revealed that the developed latent classes did not fully explain the relationship between information predictors and outcomes. However, several interaction effects were identified, indicating that both variables moderated some of the relationships observed in the models. Overall, the findings of this study indicated that people have preferences when searching for information, these preferences may be dependent on the topic at hand, and they may have implications for academic and health outcomes. These preferences were also shown to influence the impact of using certain types of sources, being apprehensive towards information, and being more open-minded or intellectually humble.

Aim 1: Latent Classes based on Information Attribute Preferences

The purpose of aim one was to test the expectation that people would be categorized into latent classes based on their information choices and the attributes present in their choices. Specifically, it was expected that three classes would be identified: credibility-focused, engagement-focused, and accuracy-focused. While latent classes were identified, only two classes were identified for both the academic and health topic. Furthermore, the preferences within these classes were not as expected. Contrary to our hypothesis that each class would be based on having unique preferences for each attribute (author, medium, and structure), the attribute preferences within the identified classes were fairly consistent with the preferences of the entire sample. However, it was found that each class preferred different levels of each attribute.

The latent classes identified from the health topic included the Clarity-Accuracy Focused class and the Credibility-Accessibility Focused class. The Clarity-Accuracy Focused class was named due to high preference for a layman author, moderate preference for using academic sources, and a very low preference for statistical structure, indicating those within this class prefer using information that may be easier to understand but is still accurate (Figueiras et al., 2021). The Credibility-Accessibility Focused class was named due to high preference for an expert author and moderate preference for using social media sources indicating those within this class may be seeking to balance their desire for credibility and accuracy with their need for an engaging and memorable presentation (Eastin, 2001; Fan et al., 2021; Francke & Sundin, 2009; Kopfman et al., 1998; Okuhara et al., 2018). The classes identified from the academic topic included the Clarity-Accessibility Focused and Credibility-Accessibility-Story Focused classes. The Clarity-Accessibility Focused class was named due to the moderate preferences for a layman

author and online sources and a low preference for statistical structure. Those within this class appear to value the clarity and simplicity of information presented by layman authors, which allows them to grasp complex concepts more easily. Additionally, their preference for online sources suggests a desire for quick and convenient access to information (Connaway et al., 2011; Gross & Latham, 2009). The Credibility-Accessibility-Story Focused class for the academic topic preferred the expert author and social media source (Eastin, 2001). Additionally, this class placed twice as much importance on the structure of the argument than the other class, preferring the story structure. This indicates that like the Credibility-Accessibility Focused health class, those within the Credibility-Accessibility-Story Focused academic class also appear to seek a balance between accurate and engaging information (Eastin, 2001; Fan et al., 2021; Francke & Sundin, 2009; Kopfman et al., 1998; Okuhara et al., 2018). Given these results, hypothesis one was partially supported, latent classes were identified however only two classes were identified instead of three, and the preferences within each group were not exactly as expected.

Aim 2: Variable Interrelationships and Predictive Model

The purpose of the second aim was to identify how the sources people use most often, their confidence in their ability to evaluate information, their engagement or apprehension towards information, and their willingness to admit knowledge limitations and be open to others' knowledge relate to one another and predict health and academic outcomes. Specifically, it was expected that using more credible sources such as academic or direct sources, engaging more with information, being less apprehensive towards information and being more intellectually humble would be associated with one another and would predict better health and academic outcomes.

Results were mostly as expected with being more confident in information evaluation skills, being more intellectually humble, engaging more with health and academic information, being less apprehensive towards health and academic information, and using direct, academic, and online sources being positively associated with one another. Additionally, being more confident in evaluating information was associated with using news sources and being more apprehensive towards academic information was associated with using social media more often. Furthermore, being within the Credibility-Accessibility-Story Focused academic information class was associated with being more apprehensive towards information.

In addition to determining how the information predictors were interrelated, their relationships with health and academic outcomes were also examined. As expected, being more intellectually humble, having more information competency, engaging more with health information, and using news sources less often was found to be associated with a better physical quality of life. Being more apprehensive towards both health and academic topics was found to be associated with a worse mental quality of life and more physical symptoms, while using social media sources more often was also associated with having more physical symptoms. In terms of academics, being more competent with information and engaging more with both health and academic information were associated with a higher semester GPA, more behavioral, cognitive, and emotional student engagement, and having a better sense of school membership. Being more apprehensive towards health and academic information was associated with having a worse sense of school membership and lower student engagement.

In addition to the linear associations, several quadratic relationships were also identified. Notably, an increase in intellectual humility exhibited a small initial increase in cognitive engagement, followed by a significant and notable increase as intellectual humility continued to

rise, suggesting there may be an optimal level of intellectual humility that promotes higher cognitive engagement. Furthermore, information competency demonstrated a quadratic relationship with sense of school membership. Initially, there was a slight upward trend in sense of school membership as information competency increased. However, once information competency scores exceeded slightly above the mean, sense of school membership started to decline. This suggests there may be a threshold beyond which higher information competency may not significantly contribute to a stronger sense of school membership. Online use and social media use also displayed a quadratic relationship with several outcomes. For online source use, emotional engagement initially dropped slightly, but as online source use continued to increase, there was a significant improvement in emotional engagement. Similarly, social media use exhibited a similar pattern, where an increase to the highest levels of use resulted in substantial improvements in emotional engagement, sense of school membership, and mental quality of life.

While those findings were a great start to identifying relationships between information beliefs, behaviors, and outcomes, including predictive models allowed for additional insights into the strength and significance of individual predictors while controlling for confounding variables. It was found that being more confident when evaluating information was associated with having greater behavioral and cognitive student engagement. This finding was not surprising as having more confidence in evaluating information may lead to a better understanding of academic materials and the ability to critically evaluate and apply them in coursework, leading to better academic performance and greater cognitive engagement (e.g., Lane et al., 2004; Motlagh et al., 2011). It may also contribute to greater motivation and interest in the material, leading to greater emotional engagement, and a higher level of active participation and effort, resulting in greater behavioral engagement (e.g., Chang et al., 2014;

Honicke & Broadbent, 2016). Using academic sources more often was also associated with more interest and enthusiasm (emotional engagement), critical thinking and deep understanding (cognitive engagement), active participation and academic effort (behavioral engagement) and earning a higher GPA. These findings can be explained by the fact that academic sources provide students with high-quality and relevant information, which can enhance their understanding of the subject matter and stimulate their interest (e.g., Li et al., 2023). Moreover, using academic sources may help students develop critical thinking skills and improve their ability to analyze and evaluate information (e.g., Hollis, 2019, Goodsett & Schmillen, 2022). Finally, the use of academic sources may signal to students that the course material is important and worth their time and effort, leading to increased participation and academic effort. As expected for similar reasons, being more engaged with academic information also predicted more cognitive student engagement and corresponds with previous literature showing that being more information literate and engaging with evaluating information was associated with better student engagement (e.g., Fosnacht, 2017). Interestingly, using direct sources more often predicted a lower semester GPA, while using online sources predicted a higher semester GPA. This finding is not as expected as it was believed using direct sources would provide more accurate information and higher academic achievement and using online sources would lead to worse academic achievement due to the overwhelming amount of information and lack of quality control. However, it is possible that students who reported using direct sources, such as email or in-person communication, may not have identified the quality and reliability of the information obtained directly from others, leading to a greater risk of inaccurate information and a narrowed viewpoint due to limited exposure to differing perspectives. Furthermore, students may find it easier to locate relevant information using online sources, allowing them to obtain more

resources and perspectives and enhance their knowledge (Bawden & Vilar, 2006; Gross & Latham, 2009). It is also possible that those who report using online sources more often have developed strong information evaluation and critical thinking skills, allowing them to identify trustworthy sources, extract accurate information, and avoid feeling overwhelmed by the amount of information online (Israel & Nsibirwa, 2018). Further research would be necessary to identify the reasoning for these relationships. Using social media sources more often was also found to predict better emotional engagement indicating its use may benefit instead of hinder students. This finding refutes the original hypothesis in that using social media platforms often will increase the frequency and amount of misinformation encountered, which has the potential to decrease the amount of trust people have in other sources, consequently affecting their emotional engagement with these sources and their education (e.g., Park et al., 2020). Social media platforms also encourage quick browsing and superficial interactions, and it was expected these interactions would hinder students' ability to fully engage with and learn from the content. However, the current study's findings are more in alignment with those found by Gulzar and colleagues (2022), who found that students' social media use was positively associated with their intrinsic motivation and student engagement. Furthermore, a growing body of research has focused on the academic benefits of social media and have attempted to integrate social media into formal learning environments to increase students' motivation and involvement in the classroom (e.g., Manca & Ranieri, 2016; Tarantino et al., 2013; Vandeyar, 2020).As expected, it was also found that being more engaged with information and more intellectually humble predicted an increased sense of school membership. When students are engaged with information, they are actively participating in the learning process and demonstrating a willingness to invest time and effort into their studies. This can lead to a greater sense of

academic competency, which can contribute to the student's sense of belonging within their institution (e.g., Gillen-O'Neel, 2021). Additionally, intellectual humility, which involves recognizing the limits of one's knowledge and being open to learning from others, fosters a collaborative and inclusive learning environment. Students who possess intellectual humility are more likely to appreciate and value diverse perspectives, which can enhance their interactions with peers and instructors, ultimately strengthening their sense of school membership (Pedler et al., 2022)

In addition to predicting academic outcomes, information predictors were also found to predict physical quality of life and physical symptoms. Specifically, being more intellectually humble predicted a better physical quality of life. As intellectually humble people are more likely to seek out and consider multiple sources of information before forming opinions or making decisions, recognize the limitations of their own knowledge, and are willing to learn from others, this can lead to more informed decisions and better health outcomes (e.g., Huynh & Senger, 2021; Koetke et al., 2022; Leary, 2022). Intellectually humble people are also less likely to be rigid in their beliefs, and more open to changing their opinions in response to new evidence which can lead to a greater willingness to engage in healthy behaviors or to make necessary lifestyle changes in response to health challenges or risk factors (e.g., Huynh & Senger, 2021; Pärnamets et al., 2022). In addition to being more intellectually humble predicting better physical quality of life, engaging more with health information was also associated with a better physical quality of life.

To further understand peoples' behaviors towards information, it was examined whether the information predictors would predict whether people searched for information about the novel topics while completing the study. It was found that for the health topic, wanting to be

more socially desirable predicted reporting searching for information during the study. This suggests that people who have a strong desire to be perceived favorably by others may be more motivated to seek out information to enhance their knowledge and engage in informed discussions, thereby increasing their social desirability. Alternatively, it is possible these individuals only reported searching for information as they believed it would be more socially desirable (Neuberger, 2016; Van de Mortel, 2008).

For the academic topic, similar results were found for social desirability, indicating that individuals who valued academic achievement and recognition may have been driven to search for information during the study to demonstrate their competence and align with the expectation of academic excellence or at least reported searching for information to appear more socially desirable (Neuberger, 2016; Van de Mortel, 2008). Additionally, having a higher self-esteem, being younger, and taking fewer semester credits predicted searching for information about the academic topic during the study, indicating people with confidence, active engagement in education, and more available time may have been more inclined to seek knowledge during the study. Furthermore, being more apprehensive towards academic information and being a member of the Clarity-Accessibility Focused class predicted searching for information. People who were apprehensive towards academic information may have experienced a higher level of uncertainty or discomfort, motivating them to actively search for information to reduce their apprehension and gain a clearer understanding of the topic at hand (Chowdhury et al., 2011). Belonging to the latent class characterized by a focus on clarity and accessibility may also foster a mindset that promotes information-seeking behaviors, aiming to enhance understanding and mastery of content (Case & Case, 2017; Valentine 2001).

Aim 3: Exploratory Models

The purpose of the third aim was to identify variables within our model that might explain or influence the other relationships in our model. It was thought that the development of latent classes of information attribute preferences would add to this model by providing an explanation as to why the other information predictors predicted academic and health outcomes. It was expected that the classes would represent different groups of information users and their behaviors when choosing information, indicated by their attribute preferences, would explain why the information predictors predicted the outcomes. Specifically, it was expected that having more confidence in evaluating information, engaging more with information, being less apprehensive towards information, being more intellectually humble, using more academic and direct sources, and using less online and social media sources would predict a latent class that focused on the credibility and accuracy of information, which would in turn predict better health and academic outcomes. However, in this study, the latent classes identified did not predict any academic or health outcomes, and they were not predicted by any information predictors. As a result, the model incorporating these latent classes as an explanatory variable was not tested. Although this occurred, this allowed for the examination of whether the latent class membership variable impacted any of the relationships between information predictors and health and academic outcomes.

It was examined whether latent class membership impacted any other predictive relationships in the model. Results showed that class membership impacted several relationships between using different types of information sources and academic outcomes. Specifically, it was found that for the Clarity-Accessibility Focused academic class, who preferred layman and online sources, using social media more often was associated with being more behaviorally engaged in their academics. As social media platforms allow people with similar interests and

goals to connect with one another, interacting with peers on social media may provide a sense of community and foster increased behavioral engagement in academics (Mahdiuon et al., 2020; Malik et al., 2019). Furthermore, those within this class prefer convenient, accessible, and entertaining information and social media may provide educational information in ways that better suit their preferences and increase their desire to participate in their education (Malik et al., 2019). Social media use also predicted worse behavioral engagement for those within the Credibility-Accessibility-Story Focused class. This was not expected as they preferred the social media source, but it is also not surprising as this group also prefers expert authors and with the diverse range of content creators on social media it can be difficult to consistently find and follow experts. Social media platforms are also known for rapid dissemination of information which can lead to information overload and avoidance, especially when prioritizing credibility (Dai et al., 2020; Guo et al., 2020; Matthes et al., 2020). Additionally, for the Clarity-Accessibility Focused class, using direct sources predicted better cognitive engagement and using academic sources more often predicted better emotional engagement. Direct sources often provide straightforward and easily understandable information which aligns with the class's preference for clarity and accessibility (Marshall et al., 2011). Furthermore, this class's focus on clarity and accessibility may reflect a strong desire for knowledge and understanding, leading them to engage more cognitively and emotionally with direct and academic sources. For the Credibility-Accessibility-Story focused class, on the other hand, using direct sources predicted worse emotional student engagement. As this class prefers experts, it was unexpected that using direct sources would be related to worse emotional engagement. However, because this group placed a slightly higher importance on the structure of the argument and preferred personal stories, the lack of narrative elements in direct sources may contribute to less emotional

connections and engagement (Nabi & Green, 2015). Alternatively, this class could be obtaining information directly from non-experts, which would not be in alignment with their preferences, and may hinder their motivation and interest in learning.

In addition to moderating the effects of information source use, latent classes were also found to influence the relationship between intellectual humility and the sense of school membership. Specifically, within the Clarity-Accessibility Focused class, higher levels of intellectual humility predicted a stronger sense of school membership. This class places an emphasis on clarity, accessibility, and academic engagement, which fosters an environment where individuals prioritize openness, learning from others, and appreciating different perspectives (Leary, 2022). Consequently, students within this class feel understood, accepted, and valued, contributing to an enhanced sense of school membership (St-Amand et al., 2017). On the other hand, it is possible that the Credibility-Accessibility-Story Focused class's emphasis on source expertise and narrative elements overshadow the impact of acknowledging one's own knowledge limitations and being open to differing perspectives, leading to a non-significant relationship between intellectual humility and a sense of school membership for this class.

In addition to the effects of latent class membership on the model's relationships, the effects of intellectual humility on these relationships were also examined. Results of these analyses indicated intellectual humility did impact the relationship between information competency and the sense of school membership. However, because of the unusual findings and that it was suspected a quadratic relationship existed between information competency and sense of school membership, these findings cannot be directly interpreted, and further investigation should be done to verify these relationships.

Intellectual humility also impacted the relationship between apprehension towards health information and physical symptoms. Specifically, having more apprehension towards health information was associated with having worse physical symptoms but only at low levels of intellectual humility. At moderate to high levels of intellectual humility, the relationship between information apprehension and physical symptoms became no longer significant. As people with low levels of intellectual humility tend to be less receptive to different perspectives and are more likely to dismiss or ignore health information that contradicts their beliefs or expectations, this can create conflict and amplify their apprehension towards information. Such resistance to alternative viewpoints, when exposed to them, can contribute to heightened stress levels and potentially manifest as physical symptoms (Dilakshini & Kumar, 2020; Yahya & Sukmayadi, 2020). People with low levels of intellectual humility may also be less inclined to seek additional information or health opinions and be more susceptible to selectively choosing and interpreting information that confirms their biases (Bowes et al., 2022; Hart et al., 2009). When these people are also unsure how to deal with information, it can cause worry and anxiety to manifest, possibly leading to amplification of their apprehension towards information and manifestation of physical symptoms (Soroya et al., 2021). Alternatively, those with higher intellectual humility may be more likely to seek clarification and understanding when faced with health information that causes apprehension (Krumrei-Mancuso et al., 2020). They may actively engage in seeking additional information and adopt healthier choices (e.g., Koetke et al., 2022). Intellectual humility is also associated with greater self-awareness and as people with higher levels of intellectual humility process health information they may become more aware of their own biases and emotions, allowing them to regulate their emotional responses to information more

effectively, leading to reduced worry, stress, and physical symptoms (Krumrei-Mancuso et al., 2020).

Intellectual humility was also found to impact the relationship between using online sources and searching for information about the academic topic during the study. Specifically, at low levels of intellectual humility, using online sources more often was associated with not searching for information during the study and at high levels, using online sources more often was associated with searching for information during the study. Furthermore, at mid-levels of intellectual humility, there was no association between using online sources and searching for information. As those with low levels of intellectual humility may have a fixed mindset or belief and believe they already possess all the necessary knowledge on a topic, they may be less likely to search for additional information (Krumrei-Mancuso et al., 2020). On the other hand, individuals with high levels of intellectual humility are more likely to recognize their own knowledge limitations and engage in information-seeking behaviors to actively search for relevant material and increase their knowledge (Krumrei-Mancuso et al., 2020). At mid-levels of intellectual humility, the association between online source use and searching for information was not significant. This suggests that individuals with moderate levels of intellectual humility may not have a consistent pattern of behavior when it comes to information seeking. Furthermore, their information-seeking behaviors may be influenced by other factors or personal preferences, rather than their level of intellectual humility.

Potential Applications of Findings

The findings from this study have significant implications for practice and the development of interventions to promote effective information acquisition and decision-making. Specifically, these findings highlight the importance of information skills in navigating the

overwhelming abundance of available information. Individuals who possess strong information evaluation and selection skills and are confident in their abilities, are more likely to make informed decisions and avoid the uncertainty of misinformation and biased sources. These skills are crucial for individuals across various domains, including healthcare and education, where accurate information is essential for optimal outcomes. By recognizing the importance of information skills and preferences, practitioners and educators can design interventions that empower people to critically evaluate sources, discern reliable information from falsehoods, and enhance their decision-making abilities. Such interventions can take the form of educational programs, workshops, or online resources that equip individuals with the necessary tools to navigate the complex landscape of information effectively (e.g., Walton & Hepworth, 2011).

Additionally, the findings from this study highlight the importance of recognizing individuals' preferences when seeking information, as these preferences may vary depending on the context. Understanding these preferences is key in tailoring information delivery to align with the needs and preferences of the target audience. For example, when disseminating health information, communicators can take into account the preferences identified in the Clarity-Accuracy Focused and Credibility-Accessibility Focused classes revealed in the study. By doing so, they can effectively cater information to different groups by using appropriate strategies. For one group, utilizing layman language and engaging mediums can be employed to present accurate information in a clear and accessible manner. Meanwhile, for another group, striking a balance between credibility and accessibility by involving expert authors and employing accessible and comprehensible language could be beneficial. By acknowledging people's preferences and tailoring information delivery accordingly, communicators can optimize the impact of their messages and ensure they reach their intended audience.

Furthermore, the implications of these findings extend to the realm of academics and online learning, particularly in relation to learner profiles and information delivery. Understanding individuals' preferences when searching for information can help educators tailor information delivery to match the needs of their learners (Sarker, 2009). By leveraging the preferences identified in the study, educators can customize their instructional materials and content to cater to different learner groups. For example, educators can implement strategies such as using clear and concise language, incorporating multimedia or other entertaining aspects, and utilizing interactive and socialization platforms to engage learners who prefer clear and accurate information. For learners who prioritize credibility and accessibility, educators can provide information that suits their desires and needs by including credible experts and highly accessible and easily understood information. Acknowledgement of learners' preferences and tailoring the delivery of information, accordingly, allows educators to optimize the impact of their instructional materials, foster student engagement, and promote effective learning experiences. Personalizing information delivery based on learner preferences not only enhances the educational experience but also ensures that learners receive information in a way that resonates with them, ultimately improving student learning and academic achievement.

The findings of this study challenged the assumption that social media use has a detrimental effect on health and academic outcomes. Contrary to this notion, the study indicated that social media use had a positive impact on participant's emotional student engagement, a sense of school membership, and mental quality of life. These findings also have significant implications for educators and institutions, compelling them to reevaluate their approach to social media integration in education settings. By recognizing the potential benefits of social media, educators can explore innovative ways to incorporate these platforms into formal learning

environments. Furthermore, fostering responsible social media use among students can be an effective strategy to enhance their motivation and engagement. By integrating social media tools into the classroom, educators can create opportunities for interactive learning, encourage collaboration, and facilitate knowledge sharing while promoting responsible usage in attempts to improve student outcomes (Wekerle et al., 2022).

Limitations

Overall, the results of this study show how imperative it is to identify students' information beliefs and behaviors and their effect on health and academics. However, there were several limitations to this study. A cross-sectional design was used to obtain information beliefs and behaviors and their effect on health and academics. While a cross-sectional design was used to obtain a snapshot of data at a specific point in time, it limited the ability to assess temporal relationships or individual changes over time. To gain a more comprehensive understanding of the dynamics between information beliefs, behaviors, and outcomes, future research could benefit from incorporating longitudinal designs that track participants information beliefs and behaviors over an extended period of time.

Other limitations should be considered when interpreting the findings of this study. The use of a choice-based scenario was used to approximate real-world decision-making, but it is important to acknowledge that participants' reported preferences may not entirely align with their actual decision-making process. Research by Walraven and colleagues (2009) has shown that students often mention more criteria for evaluating information than they actually used during web searches. This suggests a potential discrepancy between stated preferences and actual behavior. Furthermore, the reliance on self-report measures for many of the outcomes introduces the possibility of response bias. Despite accounting for social desirability, participants may have

responded in a way that reflects what they perceived as socially desirable rather than their true experiences.

Another limitation of this study was the requirement for participants to complete a total of 20 tasks, potentially leading to participant fatigue. While efforts were made to manage the time and counterbalance the tasks, the presence of fatigue may have influenced the data quality. However, an examination of missing data patterns indicated no significant pattern in the items participants did not respond to, suggesting that participant fatigue was likely not widespread. To mitigate the possibility of rushed or inattentive responses, three attention checks were included throughout the survey. These checks aimed to ensure that participants were actively engaged and provided careful consideration to their responses. While these measures were implemented, it is important to acknowledge that some participants may still have exhibited less than optimal attention and response accuracy. Furthermore, while there is no fixed rule for the number of tasks and profiles that should be included in a choice-based scenario, considering the balance between data collection and respondent engagement was crucial.

Future Directions

One of the main goals of this study was to investigate whether people's information preferences were linked to their health and academic outcomes. While the study identified distinct classes of information users based on their author, medium, and structural preferences, these classes did not accurately predict health or academic outcomes. Previous research has shown that information use does affect behavior (e.g., Bogart et al., 2010; Jolley & Douglas, 2014), so future studies should consider alternative ways to identify information classes, such as measuring participants' actual online search behaviors rather than just their stated preferences. Additionally, to better understand the relationship between information beliefs/behaviors and

academic/health outcomes, future research should use a combination of self-report and objective measures. For example, eye-tracking measures could be used to assess participants' attention and information search behaviors, while blood pressure could be used to gauge the stress they experience when searching for and evaluating information. The current study aimed to identify the usage of groups of sources based on their type: traditional news media, academic sources, direct verbal or written communication, online platforms not associated with traditional news media sources, and social media platforms not associated with traditional news media. While it is true people prefer sources they have experience with and are more likely to use sources when they have experience and confidence in their ability to use these sources (e.g., Utkarsh et al., 2019), this study looked specifically to identify whether and what types of sources individuals use, not necessarily why they choose the sources that they do. To address this concern, source groups included multiple source examples. For example, while students might have difficulties finding and evaluating online academic journals, the ‘academic sources’ group also included sources students routinely use for classes such as textbooks. Additionally, for some sources, such as Wikipedia, it is difficult to discern the credibility of information due to community contributions. However, Wikipedia also differs from other forms of online information sources such as YouTube and social media networking sites, in that it has community-enforced policies that require all information to be accurate, unbiased, and from a reputable third-party source and fact-checking control measures. Despite this Wikipedia is not considered a reliable source of information, even as a source for Wikipedia itself. Additionally, students are often told not to use Wikipedia as a source for their work. While it is important to examine individual sources of information, doing so was outside the scope of the current study. Future research should take these complexities into account to further identify the nuances present in information use.

Conclusion

Although the study did not yield conclusive evidence regarding the predictive power of people's information preferences on health and academic outcomes, it did reveal that people have preferences for certain characteristics of information and these preferences can influence how individuals engage with information, accept information, and ultimately impact their health and academic outcomes. Furthermore, the study's findings indicate variability in people's preferences for obtaining information, which is influenced by the specific topic under consideration. It was observed that information preferences in one domain, such as health-related information, may not be successful in another domain, such as academic information. This context-dependency implies that information dissemination and evaluation strategies need to be tailored to the specific topic or domain in order to effectively engage individuals and achieve the desired outcomes. The stability or change in information preferences over time can also vary among individuals and contexts. While some preferences may remain relatively stable for certain individuals, others may change in response to various factors (Betsch, 2011). External influences such as advancements in technology and changes in cultural and social norms can impact how people prefer to obtain and engage with information. For example, the current study indicated that among all participants, the preferred author for the health topic was the layman author while the preferred author for the academic topic was the expert. This indicates that not only are information preferences context and topic dependent, but it is possible that the COVID-19 pandemic and the resulting mistrust in the medical community influenced these preferences (Allen et al., 2022; Minaya et al., 2022). Additionally, the speed at which preferences change can also vary. In today's fast-paced digital age, information is readily available and constantly evolving allowing for preferences to adapt rapidly. Advancements in technology and emergence

of new social platforms can introduce new ways of accessing and consuming information, which may influence individuals' preferences. However, not all individuals may adapt at the same pace, and some may cling to familiar information-seeking habits. Individual experiences and personal development can also contribute to changes in information preferences. As individuals obtain new knowledge, gain expertise in certain domains, undergo life transitions, or develop a specific information need, their preferences for information may change accordingly. For example, someone who is diagnosed with cancer may develop a greater interest in health-related information written by physicians, leading to changes in their information preferences.

This study also showed that the types of sources people use, how confident they are in searching and evaluating information, whether they engage with or are apprehensive towards information, and being more intellectually humble, impacted various aspects of how people consume health and academic information. Given the findings of this study and the implications poor information behaviors and beliefs can have on health and academics, it is important to continue to research and educate people on the importance of developing effective information literacy skills (e.g., Bogart et al., 2010; Jolley & Douglas, 2014). This includes teaching people how to evaluate the credibility and reliability of information sources, as well as promoting the use of high-quality sources. It is also crucial to address common misconceptions and biases that people may have towards certain types of information sources and encourage more open-minded and intellectually humble attitudes towards information. By improving information literacy skills and behaviors, individuals may be able to better navigate the vast amounts of information available to them, leading to improved health outcomes and academic success.

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Table 1. Sample Descriptive Statistics (N =497)

Variables		Count	Percentage	*M*	*SE*
Age				19.08	0.07
	17-22	470	94.60%		
	> 22	27	5.40%		
Sex					
	Female	413	83.30%		
	Male	83	16.70%		
Race					
	Hispanic or Latino	198	60%		
	American Indian or Alaska Native	5	1%		
	Asian	142	28.60%		
	Black or African American	68	13.70%		
	Native Hawaiian or Other Pacific Islander	3	0.60%		
	White	129	26.00%		
	Multiracial	16	3.20%		
	Other - Not specified	6	1.20%		
Student Classification					
	Freshman	265	53.30%		
	Sophomore	108	21.70%		
	Junior	65	13.10%		
	Senior	59	11.90%		
Family Income					
	< $10,000	10	2%		
	$10,000 to $19,999	20	4%		
	$20,000 to $29,999	82	16.40%		
	$30,000 to $39,999	55	11%		
	$40,000 to $49,999	21	4.20%		
	$50,000 to $59,999	41	8.20%		
	$60,000 to $69,999	73	14.60%		
	$70,000 to $79,999	46	9.20%		
	$80,000 to $89,999	39	7.80%		
	$90,000 to $99,999	37	7.40%		
	$100,000 to $149,999	31	6.20%		
	$150,000 or more	29	5.80%		
Difficulty Paying Bills					
	Very Difficult	14	2.90%		
	Somewhat Difficult	158	32.21%		
	Not Very Difficult	226	46.10%		
	Not At All Difficult	92	18.80%		
Prior Knowledge Duane Syndrome					
	Prior Knowledge	40	8.10%		
	No Prior Knowledge	456	91.90%		
Prior Knowledge Pastry War					
	Prior Knowledge	15	3%		
	No Prior Knowledge	480	97%		

Table 2. Descriptives for Continuous Study Variables (N=497)

Variables	*n*	*M*	*SD*	Minimum	Maximum
Information Competency	493	19.34	3.15	5.00	25.00
Health Information Engagement	494	2.98	0.62	0.50	4.00
Academic Information Engagement	494	2.98	0.66	0.00	4.00
Health Information Apprehension	486	1.86	0.83	0.00	4.00
Academic Information Apprehension	489	1.87	0.84	0.00	4.00
Intellectual Humility	467	81.62	9.10	56.00	103.00
Previous Behaviors: News	497	1.58	1.13	0.00	4.00
Previous Behaviors: Academic	497	1.94	1.18	0.00	4.00
Previous Behaviors: Direct	492	2.60	1.16	0.00	4.00
Previous Behaviors: Online	497	2.73	1.09	0.00	4.00
Previous Behaviors: Social	497	2.75	1.27	0.00	4.00
Self-esteem	480	22.03	5.17	10.00	37.00
Social Desirability	489	19.68	2.71	13.00	26.00
Semester GPA	484	3.33	0.73	0.00	4.00
Semester Credits Completed	496	13.95	2.71	2.00	19.00
Physical QOL	497	55.21	7.42	17.73	70.99
Mental QOL	497	38.12	12.58	3.49	67.45
Physical Symptoms	453	22.87	18.12	0.00	108.00
Behavioral Student Engagement	484	20.47	2.50	9.00	25.00
Emotional Student Engagement	489	16.57	3.68	5.00	25.00
Cognitive Student Engagement	494	18.15	3.43	5.00	25.00
Sense of School Membership	469	3.51	0.59	1.72	4.94

Table 3. Fit Statistics of Information Classes After Removing Those with Prior Knowledge

Topic	Components	Silhouette Score	Log-Likelihood	BIC	AIC
Health					
	1 class		13.37	-368444.01	-368850.78
	2 classes	0.15	23.15	-637969.01	-638790.06
	3 classes	0.30	22.93	-631483.66	-632719.01
	4 classes	0.40	26.36	-725602.77	-727252.42
	5 classes	0.38	30.35	-835187.67	-837251.62
Academic					
	1 class		13.37	-388579.91	-388989.54
	2 classes	0.29	19.73	-573448.59	-574275.44
	3 classes	0.30	22.87	-664156.71	-665400.77
	4 classes	0.40	26.10	-757791.85	-759453.13
	5 classes	0.38	28.63	-830913.41	-832991.91

Table 4. Attribute Importance, Overall and By Latent Class After Removing Those Just with Prior Knowledge

Topic	Class	Attribute	Top Choice	Importance	95% CI
Health					
	Clarity-Accuracy Focused				
	n = 369	Author	Layman	0.71	0.01
		Medium	Academic	0.27	0.01
		Structure	Statistics	0.01	0.004
	Credibility-Accessibility Focused				
	n = 91	Author	Expert	0.66	0.03
		Medium	Social Media	0.32	0.04
		Structure	Story	0.02	0.01
	Overall				
		Author	Layman	0.71	0.007
		Medium	Academic	0.28	0.006
		Structure	Statistics	0.01	0.002
Academic					
	Clarity-Accessibility Focused				
	n = 250	Author	Layman	0.53	0.01
		Medium	Online	0.39	0.02
		Structure	Statistics	0.08	0.01
	Credibility-Accessibility-Story Focused				
	n = 235	Author	Expert	0.42	0.02
		Medium	Social Media	0.42	0.01
		Structure	Story	0.16	0.02
	Overall				
		Author	Expert	0.48	0.007
		Medium	Online	0.41	0.01
		Structure	Statistics	0.12	0.01

Table 5. Zero-Order Correlation Coefficients for Continuous Information Predictors, Covariates, and Outcomes

		1	2	3	4	5	6	7	8	9	10	11	12	13
1. Self-Esteem	*r*	1	-.322	.034	-.006	-.054	.106	.018	-.038	-.075	-.11	-.069	.279	-.153
	p		<.001	.459	.887	.248	.021	.698	.412	.109	.017	.134	<.001	<.001
	N	480	472	480	480	465	473	480	479	453	476	477	473	477
2. Social Desirability	*r*	-.322	1	.026	.047	-.073	.047	.042	.045	.175	.023	.124	-.227	.086
	p	<.001		.571	.296	.114	.307	.355	.318	<.001	.615	.006	<.001	.058
	N	472	489	489	488	474	482	489	488	459	485	486	481	486
3. Age	*r*	.034	.026	1	.139	-.018	.127	.681	-.267	.058	.025	.041	-.028	.098
	p	.459	.571		.002	.697	.005	<.001	<.001	.214	.576	.358	.537	.030
	N	480	489	497	496	482	490	497	496	467	493	494	489	494
4. Sex	*r*	-.006	.047	.139	1	.009	.054	.054	-.071	.027	-.004	-.067	-.060	-.014
	p	.887	.296	.002		.851	.230	.230	.115	.556	.931	.136	.185	.752
	N	480	488	496	496	481	489	496	495	466	492	493	488	493
5. Family Income	*r*	-.054	-.073	-.018	.009	1	-.524	.039	-.008	.003	.052	-.089	-.007	-.081
	p	.248	.114	.697	.851		<.001	.387	.862	.946	.256	.052	.887	.075
	N	465	474	482	481	482	481	482	481	452	478	479	474	479
6. Difficulty Paying Bills	*r*	.106	.047	.127	.054	-.524	1	.091	.066	-.013	-.036	.113	.058	.075
	p	.021	.307	.005	.230	<.001		.043	.145	.776	.435	.013	.202	.100
	N	473	482	490	489	481	490	490	489	460	486	487	482	487
7. Student Classification	*r*	.018	.042	.681	.054	.039	.091	1	-.163	.069	.106	.026	-.065	.094
	p	.698	.355	<.001	.230	.387	.043		<.001	.136	.018	.560	.148	.036
	N	480	489	497	496	482	490	497	496	467	493	494	489	494
8. Semester Credits Completed	*r*	-.038	.045	-.267	-.071	-.008	.066	-.163	1	-.010	-.049	.017	.051	-.016
	p	.412	.318	<.001	.115	.862	.145	<.001		.835	.280	.713	.260	.731
	N	479	488	496	495	481	489	496	496	466	492	493	488	493

Note. * p < .05; ** p < .001

		1	2	3	4	5	6	7	8	9	10	11	12	13
9. Intellectual Humility	*r*	-.075	.175	.058	.027	.003	-.013	.069	-.010	1	.325	.307	-.231	.253
	p	.109	<.001	.214	.556	.946	.776	.136	.835		<.001	<.001	<.001	<.001
	N	453	459	467	466	452	460	467	466	467	463	464	459	464
10. Information Competency	*r*	-.11	.023	.025	-.004	.052	-.036	.106	-.049	.325	1	.27	-.164	.271
	p	.017	.615	.576	.931	.256	.435	.018	.280	<.001		<.001	<.001	<.001
	N	476	485	493	492	478	486	493	492	463	493	490	485	490
11. Academic Engagement	*r*	-.069	.124	.041	-.067	-.089	.113	.026	.017	.307	.27	1	-.082	.606
	p	.134	.006	.358	.136	.052	.013	.560	.713	<.001	<.001		.070	<.001
	N	477	486	494	493	479	487	494	493	464	490	494	487	491
12. Academic Apprehension	*r*	.279	-.227	-.028	-.060	-.007	.058	-.065	.051	-.231	-.164	-.082	1	-.097
	p	<.001	<.001	.537	.185	.887	.202	.148	.260	<.001	<.001	.070		.032
	N	473	481	489	488	474	482	489	488	459	485	487	489	486
13. Health Engagement	*r*	-.153	.086	.098	-.014	-.081	.075	.094	-.016	.253	.271	.606	-.097	1
	p	<.001	.058	.030	.752	.075	.100	.036	.731	<.001	<.001	<.001	.032	
	N	477	486	494	493	479	487	494	493	464	490	491	486	494
14. Health Apprehension	*r*	.286	-.318	-.139	-.073	-.052	.059	-.162	-.017	-.256	-.155	-.080	.72	-.092
	p	<.001	<.001	.002	.106	.261	.198	<.001	.703	<.001	<.001	.080	<.001	.043
	N	469	478	486	485	471	479	486	485	457	482	483	480	483
15. News Source Use	*r*	-.047	.067	.003	-.009	-.037	-.008	-.050	-.041	-.013	.098	.066	-.007	.060
	p	.300	.139	.946	.843	.413	.856	.267	.367	.778	.029	.142	.875	.186
	N	480	489	497	496	482	490	497	496	467	493	494	489	494
16. Academic Source Use	*r*	.017	.049	.098	-.027	-.030	.060	.051	.068	.127	.108	.126	-.046	.135
	p	.704	.283	.028	.543	.515	.185	.261	.133	.006	.017	.005	.315	.003
	N	480	489	497	496	482	490	497	496	467	493	494	489	494
17. Direct Source Use	*r*	-.108	-.028	.006	-.143	-.060	-.001	.015	-.023	.148	.151	.115	-.001	.122
	p	.018	.542	.888	.001	.193	.975	.746	.605	.001	<.001	.011	.980	.007
	N	475	484	492	491	477	485	492	491	462	488	489	484	489

Note. * p < .05; ** p < .001

		1	2	3	4	5	6	7	8	9	10	11	12	13
18. Online Source Use	*r*	.037	-.045	-.053	.048	-.068	.069	.029	-.045	.082	.083	.034	.020	.085
	p	.418	.324	.242	.281	.137	.126	.518	.314	.077	.065	.454	.663	.059
	N	480	489	497	496	482	490	497	496	467	493	494	489	494
19. Social Media Use	*r*	.003	-.119	-.010	-.085	-.063	-.005	.044	.022	-.081	.054	-.010	.12	-.010
	p	.945	.008	.826	.058	.169	.903	.326	.624	.082	.229	.826	.008	.830
	N	480	489	497	496	482	490	497	496	467	493	494	489	494
20. Physical QOL	*r*	.080	-.09	.036	.038	.122	-.054	.022	.062	.19	.089	.018	-.015	.134
	p	.080	.047	.429	.401	.007	.235	.627	.168	<.001	.048	.695	.733	.003
	N	480	489	497	496	482	490	497	496	467	493	494	489	494
21. Mental QOL	*r*	-.556	.372	-.122	.088	-.001	-.112	-.061	.007	-.011	.029	.011	-.158	.009
	p	<.001	<.001	.006	.049	.984	.013	.178	.870	.817	.515	.802	<.001	.850
	N	480	489	497	496	482	490	497	496	467	493	494	489	494
22. Physical Symptoms	*r*	.365	-.193	.020	-.19	-.058	.115	-.046	-.066	-.092	-.034	.021	.107	-.043
	p	<.001	<.001	.674	<.001	.225	.015	.330	.158	.057	.473	.661	.025	.366
	N	438	446	453	452	440	448	453	452	427	450	450	445	450
23. Term GPA	*r*	-.034	-.058	-.199	.066	.168	-.139	-.032	.065	.030	.138	.11	-.053	.138
	p	.466	.209	<.001	.150	<.001	.002	.480	.156	.525	.002	.015	.251	.002
	N	469	476	484	483	471	478	484	483	454	480	481	476	481
24. Behavioral Engagement	*r*	-.268	.191	-.066	-.061	.12	-.121	-.016	.071	.149	.253	.143	-.056	.154
	p	<.001	<.001	.149	.178	.009	.008	.722	.119	.001	<.001	.002	.223	<.001
	N	467	477	484	483	469	477	484	483	454	480	481	478	481
25. Emotional Engagement	*r*	-.302	.229	-.048	.010	.003	-.064	-.078	.049	.176	.135	.169	-.128	.134
	p	<.001	<.001	.293	.823	.940	.164	.083	.282	<.001	.003	<.001	.005	.003
	N	472	481	489	488	474	482	489	488	459	485	486	481	486
26. Cognitive Engagement	*r*	-.21	.121	.062	-.022	.106	-.103	.084	-.031	.257	.296	.246	-.14	.271
	p	<.001	.008	.172	.621	.021	.023	.063	.489	<.001	<.001	<.001	.002	<.001
	N	477	486	494	493	479	487	494	493	464	490	491	486	491

Note. * p < .05; ** p < .001

		1	2	3	4	5	6	7	8	9	10	11	12	13
27. Sense of School Membership	*r*	-.459	.229	-.106	-.046	.032	-.065	-.059	.088	.25	.24	.21	-.141	.183
	p	<.001	<.001	.021	.319	.497	.163	.203	.056	<.001	<.001	<.001	.002	<.001
	N	453	461	469	468	457	465	469	468	440	466	466	463	466
28. During Study Search-Health Topic	*r*	.011	.132	-.056	-.010	-.055	.064	-.022	-.087	-.018	-.022	.065	.040	.072
	p	.812	.004	.214	.816	.224	.154	.624	.052	.695	.633	.146	.374	.109
	N	480	489	497	496	482	490	497	496	467	493	494	489	494
29. During Study Search-Academic Topic	*r*	.055	.115	-.070	.001	-.087	.102	-.024	-.117	.044	-.009	.072	.072	.064
	p	.230	.011	.118	.974	.057	.024	.593	.009	.340	.834	.113	.114	.154
	N	479	488	496	495	481	489	496	495	466	492	493	488	493

Note. * p < .05; ** p < .001

Table 5. Zero-Order Correlation Coefficients for Continuous Information Predictors, Covariates, and Outcomes (Continued)

		14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1. Self-Esteem	r	.286	-.047	.017	-.108	.037	.003	.080	-.556	.365	-.034	-.268	-.302	-.21	-.459	.011	.055
	p	<.001	.300	.704	.018	.418	.945	.080	<.001	<.001	.466	<.001	<.001	<.001	<.001	.812	.230
	N	469	480	480	475	480	480	480	480	438	469	467	472	477	453	480	479
2. Social Desirability	r	-.318	.067	.049	-.028	-.045	-.119	-.09	.372	-.193	-.058	.191	.229	.121	.229	.132	.115
	p	<.001	.139	.283	.542	.324	.008	.047	<.001	<.001	.209	<.001	<.001	.008	<.001	.004	.011
	N	478	489	489	484	489	489	489	489	446	476	477	481	486	461	489	488
3. Age	r	-.139	.003	.098	.006	-.053	-.010	.036	-.122	.020	-.199	-.066	-.048	.062	-.106	-.056	-.070
	p	.002	.946	.028	.888	.242	.826	.429	.006	.674	<.001	.149	.293	.172	.021	.214	.118
	N	486	497	497	492	497	497	497	497	453	484	484	489	494	469	497	496
4. Sex	r	-.073	-.009	-.027	-.143	.048	-.085	.038	.088	-.19	.066	-.061	.010	-.022	-.046	-.010	.001
	p	.106	.843	.543	.001	.281	.058	.401	.049	<.001	.150	.178	.823	.621	.319	.816	.974
	N	485	496	496	491	496	496	496	496	452	483	483	488	493	468	496	495
5. Family Income	r	-.052	-.037	-.030	-.060	-.068	-.063	.122	-.001	-.058	.168	.12	.003	.106	.032	-.055	-.087
	p	.261	.413	.515	.193	.137	.169	.007	.984	.225	<.001	.009	.940	.021	.497	.224	.057
	N	471	482	482	477	482	482	482	482	440	471	469	474	479	457	482	481
6. Difficulty Paying Bills	r	.059	-.008	.060	-.001	.069	-.005	-.054	-.112	.115	-.139	-.121	-.064	-.103	-.065	.064	.102
	p	.198	.856	.185	.975	.126	.903	.235	.013	.015	.002	.008	.164	.023	.163	.154	.024
	N	479	490	490	485	490	490	490	490	448	478	477	482	487	465	490	489
7. Student Classification	r	-.162	-.050	.051	.015	.029	.044	.022	-.061	-.046	-.032	-.016	-.078	.084	-.059	-.022	-.024
	p	<.001	.267	.261	.746	.518	.326	.627	.178	.330	.480	.722	.083	.063	.203	.624	.593
	N	486	497	497	492	497	497	497	497	453	484	484	489	494	469	497	496
8. Semester Credits Completed	r	-.017	-.041	.068	-.023	-.045	.022	.062	.007	-.066	.065	.071	.049	-.031	.088	-.087	-.117
	p	.703	.367	.133	.605	.314	.624	.168	.870	.158	.156	.119	.282	.489	.056	.052	.009
	N	485	496	496	491	496	496	496	496	452	483	483	488	493	468	496	495

Note. * $p < .05$; ** $p < .001$

		14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
9. Intellectual Humility	r	-.256	-.013	.127	.148	.082	-.081	.19	-.011	-.092	.030	.149	.176	.257	.25	-.018	.044
	p	<.001	.778	.006	.001	.077	.082	<.001	.817	.057	.525	.001	<.001	<.001	<.001	.695	.340
	N	457	467	467	462	467	467	467	467	427	454	454	459	464	440	467	466
10. Information Competency	r	-.155	.098	.108	.151	.083	.054	.089	.029	-.034	.138	.253	.135	.296	.24	-.022	-.009
	p	<.001	.029	.017	<.001	.065	.229	.048	.515	.473	.002	<.001	.003	<.001	<.001	.633	.834
	N	482	493	493	488	493	493	493	493	450	480	480	485	490	466	493	492
11. Academic Engagement	r	-.080	.066	.126	.115	.034	-.010	.018	.011	.021	.11	.143	.169	.246	.21	.065	.072
	p	.080	.142	.005	.011	.454	.826	.695	.802	.661	.015	.002	<.001	<.001	<.001	.146	.113
	N	483	494	494	489	494	494	494	494	450	481	481	486	491	466	494	493
12. Academic Apprehension	r	.72	-.007	-.046	-.001	.020	.12	-.015	-.158	.107	-.053	-.056	-.128	-.14	-.141	.040	.072
	p	<.001	.875	.315	.980	.663	.008	.733	<.001	.025	.251	.223	.005	.002	.002	.374	.114
	N	480	489	489	484	489	489	489	489	445	476	478	481	486	463	489	488
13. Health Engagement	r	-.092	.060	.135	.122	.085	-.010	.134	.009	-.043	.138	.154	.134	.271	.183	.072	.064
	p	.043	.186	.003	.007	.059	.830	.003	.850	.366	.002	<.001	.003	<.001	<.001	.109	.154
	N	483	494	494	489	494	494	494	494	450	481	481	486	491	466	494	493
14. Health Apprehension	r	1	.010	-.047	.009	.013	.121	.011	-.213	.162	.027	-.12	-.122	-.141	-.136	.011	.049
	p		.826	.299	.842	.780	.007	.805	<.001	<.001	.562	.009	.008	.002	.003	.807	.279
	N	486	486	486	482	486	486	486	486	443	473	475	478	483	459	486	485
15. News Source Use	r	.010	1	.263	.021	.046	.000	-.088	-.008	.067	-.015	.054	.043	.178	.041	.062	.082
	p	.826		<.001	.645	.310	1.000	.049	.858	.157	.737	.240	.341	<.001	.376	.170	.068
	N	486	497	497	492	497	497	497	497	453	484	484	489	494	469	497	496
16. Academic Source Use	r	-.047	.263	1	.14	.101	-.104	-.023	-.022	.035	.105	.161	.14	.269	.042	.036	.065
	p	.299	<.001		.002	.025	.020	.613	.624	.452	.021	<.001	.002	<.001	.360	.425	.149
	N	486	497	497	492	497	497	497	497	453	484	484	489	494	469	497	496

Note. * $p < .05$; ** $p < .001$

		14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
17. Direct Source Use	r	.009	.021	.14	1	.249	.233	.052	.016	.002	-.045	.088	.054	.165	.119	.039	.028
	p	.842	.645	.002		<.001	<.001	.249	.728	.966	.327	.053	.233	<.001	.010	.386	.536
	N	482	492	492	492	492	492	492	492	448	479	479	484	489	464	492	491
18. Online Source Use	r	.013	.046	.101	.249	1	.36	.087	-.074	.034	.119	-.038	.030	.066	.062	.009	.045
	p	.780	.310	.025	<.001		<.001	.053	.098	.469	.009	.407	.514	.142	.178	.850	.319
	N	486	497	497	492	497	497	497	497	453	484	484	489	494	469	497	496
19. Social Media Use	r	.121	.000	-.104	.233	.36	1	.034	-.041	.103	-.058	-.035	-.046	-.013	.053	-.025	-.036
	p	.007	1.000	.020	<.001	<.001		.444	.366	.028	.205	.440	.314	.767	.256	.572	.421
	N	486	497	497	492	497	497	497	497	453	484	484	489	494	469	497	496
20. Physical QOL	r	.011	-.088	-.023	.052	.087	.034	1	-.397	-.233	.080	.007	-.027	.093	-.002	.008	.009
	p	.805	.049	.613	.249	.053	.444		<.001	<.001	.079	.872	.558	.040	.974	.860	.845
	N	486	497	497	492	497	497	497	497	453	484	484	489	494	469	497	496
21. Mental QOL	r	-.213	-.008	-.022	.016	-.074	-.041	-.397	1	-.452	.088	.243	.333	.105	.394	.028	.021
	p	<.001	.858	.624	.728	.098	.366	<.001		<.001	.052	<.001	<.001	.019	<.001	.537	.642
	N	486	497	497	492	497	497	497	497	453	484	484	489	494	469	497	496
22. Physical Symptoms	r	.162	.067	.035	.002	.034	.103	-.233	-.452	1	-.122	-.132	-.185	-.065	-.278	.023	.039
	p	<.001	.157	.452	.966	.469	.028	<.001	<.001		.010	.005	<.001	.171	<.001	.624	.408
	N	443	453	453	448	453	453	453	453	453	441	443	446	450	430	453	452
23. Term GPA	r	.027	-.015	.105	-.045	.119	-.058	.080	.088	-.122	1	.167	.012	.088	.035	-.025	.005
	p	.562	.737	.021	.327	.009	.205	.079	.052	.010		<.001	.798	.053	.456	.578	.906
	N	473	484	484	479	484	484	484	484	441	484	471	476	481	457	484	483
24. Behavioral Engagement	r	-.12	.054	.161	.088	-.038	-.035	.007	.243	-.132	.167	1	.367	.446	.368	.045	.055
	p	.009	.240	<.001	.053	.407	.440	.872	<.001	.005	<.001		<.001	<.001	<.001	.319	.226
	N	475	484	484	479	484	484	484	484	443	471	484	476	481	458	484	483
25. Emotional Engagement	r	-.122	.043	.14	.054	.030	-.046	-.027	.333	-.185	.012	.367	1	.439	.517	.055	.052
	p	.008	.341	.002	.233	.514	.314	.558	<.001	<.001	.798	<.001		<.001	<.001	.227	.256
	N	478	489	489	484	489	489	489	489	446	476	476	489	486	464	489	488
26. Cognitive Engagement	r	-.141	.178	.269	.165	.066	-.013	.093	.105	-.065	.088	.446	.439	1	.355	.071	.083
	p	.002	<.001	<.001	<.001	.142	.767	.040	.019	.171	.053	<.001	<.001		<.001	.116	.067
	N	483	494	494	489	494	494	494	494	450	481	481	486	494	466	494	493

Note. * p < .05; ** p < .001

		14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
27. Sense of	r	-.136	.041	.042	.119	.062	.053	-.002	.394	-.278	.035	.368	.517	.355	1	.003	.040
School	p	.003	.376	.360	.010	.178	.256	.974	<.001	<.001	.456	<.001	<.001	<.001		.956	.387
Membership	N	459	469	469	464	469	469	469	469	430	457	458	464	466	469	469	468
28. During	r	.011	.062	.036	.039	.009	-.025	.008	.028	.023	-.025	.045	.055	.071	.003	1	.711
Study	p	.807	.170	.425	.386	.850	.572	.860	.537	.624	.578	.319	.227	.116	.956		<.001
Search-Health																	
Topic	N	486	497	497	492	497	497	497	497	453	484	484	489	494	469	497	496
29. During	r	.049	.082	.065	.028	.045	-.036	.009	.021	.039	.005	.055	.052	.083	.040	.711	1
Study	p	.279	.068	.149	.536	.319	.421	.845	.642	.408	.906	.226	.256	.067	.387	<.001	
Search-Academic																	
Topic	N	485	496	496	491	496	496	496	496	452	483	483	488	493	468	496	496

Note. * p < .05; ** p < .001

Table 6. Correlations Between Continuous Variables and Categorical Class Membership

		Health Latent Class	Academic Latent Class
Self-Esteem	*r*	-.004	.023
	p	.926	.637
	N	437	437
Social Desirability	*r*	-.058	.011
	p	.220	.822
	N	446	446
Age	*r*	-.076	.004
	p	.108	.934
	N	452	452
Sex at Birth	*r*	-.087	-.061
	p	.066	.199
	N	451	451
Family Income	*r*	.063	-.015
	p	.188	.759
	N	438	438
Difficulty Paying Bills	*r*	-.057	-.038
	p	.227	.422
	N	445	445
Student Classification	*r*	-.087	.018
	p	.065	.700
	N	452	452
Semester Credits Completed	*r*	-.073	-.003
	p	.122	.953
	N	451	451
Intellectual Humility	*r*	-.062	.015
	p	.199	.761
	N	425	425
Information Competency	*r*	.032	-.027
	p	.501	.571
	N	448	448
Academic Engagement	*r*	-.003	-.040
	p	.945	.394
	N	449	449
Academic Apprehension	*r*	.000	.120
	p	.994	.011*
	N	445	445
Health Engagement	*r*	-.025	.016
	p	.603	.732
	N	449	449
Health Apprehension	*r*	.025	.041
	p	.593	.390
	N	442	442

Note. * p < .05; ** p < .001

		Health Latent Class	Academic Latent Class
News Source Use	*r*	-.018	.013
	p	.702	.791
	N	452	452
Academic Source Use	*r*	.016	.019
	p	.730	.693
	N	452	452
Direct Source Use	*r*	.048	.047
	p	.311	.322
	N	447	447
Online Source Use	*r*	.008	.013
	p	.866	.786
	N	452	452
Social Media Use	*r*	.048	-.054
	p	.311	.256
	N	452	452
Physical QOL	*r*	.065	-.010
	p	.166	.833
	N	452	452
Mental QOL	*r*	-.017	-.039
	p	.720	.406
	N	452	452
Physical Symptoms	*r*	-.012	-.028
	p	.800	.574
	N	417	417
Term GPA	*r*	.062	.011
	p	.191	.825
	N	440	440
Behavioral Engagement	*r*	.045	.037
	p	.343	.439
	N	440	440
Emotional Engagement	*r*	.024	-.061
	p	.617	.200
	N	445	445
Cognitive Engagement	*r*	.078	-.007
	p	.099	.886
	N	449	449
Sense of School Membership	*r*	.034	-.066
	p	.484	.175
	N	425	425

Note: * $p < .05$; ** $p < .001$

Table 7. Quadratic Regression Results for Quadratic Predictors on Linear Outcomes

Outcome	Predictor	*B*	*SE*	*t*	*p*
Semester GPA					
	Information Competency	0.002	0.001	2.22	.03 *
	Information Competency Quad Term	-8.70E-08	5.56E-08	-1.57	.12
	Academic Information Engagement	-1.432	1.070	-1.34	.18
	Academic Information Engagement Quad Term	0.108	0.057	1.91	.06
	Academic Information Apprehension	-2.391	3.872	-0.62	.54
	Academic Information Apprehension Quad Term	0.328	1.028	0.32	.75
	Intellectual Humility	-0.722	1.355	-0.53	.60
	Intellectual Humility Quad Term	0.005	0.008	0.58	.56
	News Source Use	-0.173	2.366	-0.07	.94
	News Source Use Quad Term	-0.026	0.672	-0.04	.97
	Academic Source Use	3.537	2.400	1.47	.14
	Academic Source Use Quad Term	-0.477	0.589	-0.81	.42
	Direct Source Use	-2.654	2.841	-0.93	.35
	Direct Source Use Quad Term	0.419	0.598	0.70	.48
	Online Source Use	-2.359	2.608	-0.91	.37
	Online Source Use Quad Term	0.330	0.556	0.59	.55
	Social Media Use	-2.359	2.608	-0.91	.37
	Social Media Use Quad Term	0.330	0.556	0.59	.55
Behavioral Engagement					
	Information Competency	0.236	0.164	1.45	.15
	Information Competency Quad Term	-1.09E-06	8.80E-06	-0.12	.90
	Academic Information Engagement	202.241	174.282	1.16	.25
	Academic Information Engagement Quad Term	-4.465	9.198	-0.49	.63
	Academic Information Apprehension	-1335.300	622.000	-2.15	.03*
	Academic Information Apprehension Quad Term	310.400	164.700	1.88	.06
	Intellectual Humility	-109.245	220.753	-0.50	.62
	Intellectual Humility Quad Term	0.982	1.353	0.73	.47
	News Source Use	-210.200	381.700	-0.55	.58
	News Source Use Quad Term	107.100	108.100	0.99	.32
	Academic Source Use	-167.260	390.560	-0.43	.67
	Academic Source Use Quad Term	153.570	96.430	1.59	.11
	Direct Source Use	-371.030	451.280	-0.82	.41
	Direct Source Use Quad Term	132.730	95.650	1.39	.17
	Online Source Use	-292.690	426.520	-0.69	.49
	Online Source Use Quad Term	45.620	90.930	0.50	.62
	Social Media Use	-292.690	426.520	-0.69	.49
	Social Media Use Quad Term	45.620	90.930	0.50	.62

Note: * $p < .05$
** $p < .001$

Outcome	Predictor	*B*	*SE*	*t*	*p*
Cognitive Engagement					
	Information Competency	4.34E-04	1.77E-04	2.45	.01*
	Information Competency Quad Term	-8.42E-09	9.54E-09	-0.88	.38
	Academic Information Engagement	0.323	0.187	1.72	.09
	Academic Information Engagement Quad Term	-0.005	0.010	-0.52	.61
	Academic Information Apprehension	-0.604	0.672	-0.90	.37
	Academic Information Apprehension Quad Term	0.008	0.176	0.05	.96
	Intellectual Humility	-0.489	0.232	-2.11	.04*
	Intellectual Humility Quad Term	0.004	0.001	2.53	.01*
	News Source Use	0.824	0.414	1.99	.05*
	News Source Use Quad Term	-0.084	0.117	-0.72	.47
	Academic Source Use	0.810	0.417	1.94	.05
	Academic Source Use Quad Term	-0.008	0.102	-0.08	.94
	Direct Source Use	-0.068	0.495	-0.14	.89
	Direct Source Use Quad Term	0.122	0.105	1.16	.25
	Online Source Use	-0.312	0.467	-0.67	.50
	Online Source Use Quad Term	0.061	0.100	0.61	.54
	Social Media Use	-0.312	0.467	-0.67	.50
	Social Media Use Quad Term	0.061	0.100	0.61	.54
Emotional Engagement					
	Information Competency	3.71E-04	1.98E-04	1.87	.06
	Information Competency Quad Term	-1.29E-08	1.07E-08	-1.20	.23
	Academic Information Engagement	0.290	0.205	1.41	.16
	Academic Information Engagement Quad Term	-0.007	0.011	-0.60	.55
	Academic Information Apprehension	-0.226	0.727	-0.31	.76
	Academic Information Apprehension Quad Term	-0.093	0.191	-0.48	.63
	Intellectual Humility	-0.367	0.257	-1.43	.15
	Intellectual Humility Quad Term	0.003	0.002	1.71	.09
	News Source Use	0.244	0.451	0.54	.59
	News Source Use Quad Term	-0.031	0.127	-0.24	.81
	Academic Source Use	0.235	0.466	0.51	.61
	Academic Source Use Quad Term	0.052	0.114	0.46	.65
	Direct Source Use	-1.041	0.537	-1.94	.05
	Direct Source Use Quad Term	0.267	0.114	2.34	.02*
	Online Source Use	-1.739	0.499	-3.48	.001*
	Online Source Use Quad Term	0.355	0.106	3.33	.001*
	Social Media Use	-1.739	0.499	-3.48	.001*
	Social Media Use Quad Term	0.355	0.106	3.33	.001*
School Membership					
	Information Competency	1.37E-04	3.08E-05	4.45	< .001**
	Information Competency Quad Term	-5.44E-09	1.65E-09	-3.29	.001*
	Academic Information Engagement	0.073	0.033	2.21	.03*
	Academic Information Engagement Quad Term	-0.002	0.002	-1.23	.22
	Academic Information Apprehension	-0.192	0.118	-1.63	.10

Note: * $p < .05$; ** $p < .001$

Outcome	Predictor	*B*	*SE*	*t*	*p*
School Membership	Academic Information Apprehension Quad Term	0.026	0.031	0.84	.40
	Intellectual Humility	0.050	0.042	1.20	.23
	Intellectual Humility Quad Term	-2.08E-04	2.55E-04	-0.82	.42
	News Source Use	0.083	0.073	1.14	.26
	News Source Use Quad Term	-0.018	0.020	-0.90	.37
	Academic Source Use	0.091	0.075	1.21	.23
	Academic Source Use Quad Term	-0.018	0.018	-0.98	.33
	Direct Source Use	0.095	0.087	1.09	.28
	Direct Source Use Quad Term	-0.008	0.018	-0.42	.67
	Online Source Use	-0.218	0.082	-2.67	.007*
	Online Source Use Quad Term	0.054	0.017	3.07	.002*
	Social Media Use	-0.218	0.082	-2.67	.007*
	Social Media Use Quad Term	0.054	0.017	3.07	.002*
Physical QOL					
	Information Competency	8.97E-01	3.28	0.27	.78
	Information Competency Quad Term	3.35E-05	1.76E-04	0.19	.85
	Health Information Engagement	6618.400	3576.900	1.85	.06
	Health Information Engagement Quad Term	-233.900	191.100	-1.22	.22
	Health Information Apprehension	480.940	12180.260	0.04	.97
	Health Information Apprehension Quad Term	93.380	3278.350	0.03	.98
	Intellectual Humility	-489.070	4254.760	-0.12	.91
	Intellectual Humility Quad Term	10.800	26.010	0.42	.68
	News Source Use	-4397.000	7388.000	-0.60	.55
	News Source Use Quad Term	-108.000	2083.000	-0.05	.96
	Academic Source Use	-4286.400	7666.700	-0.56	.58
	Academic Source Use Quad Term	801.500	1880.500	0.43	.67
	Direct Source Use	13875.000	8817.000	1.57	.12
	Direct Source Use Quad Term	-2449.000	1864.000	-1.31	.19
	Online Source Use	5502.200	8259.700	0.67	.51
	Online Source Use Quad Term	-850.600	1761.400	-0.48	.63
	Social Media Use	5502.200	8259.700	0.67	.51
	Social Media Use Quad Term	-850.600	1761.400	-0.48	.63
Mental QOL					
	Information Competency	5.99E-04	0.001	0.88	.38
	Information Competency Quad Term	-2.74E-08	3.66E-08	-0.75	.45
	Health Information Engagement	6618.400	3576.900	1.85	.06
	Health Information Engagement Quad Term	-233.900	191.100	-1.22	.22
	Health Information Apprehension	-4.103	2.476	-1.66	.37
	Health Information Apprehension Quad Term	0.247	0.666	0.37	.71
	Intellectual Humility	-0.721	0.898	-0.80	.42
	Intellectual Humility Quad Term	0.004	0.005	0.79	.43
	News Source Use	0.497	1.533	0.32	.75
	News Source Use Quad Term	-0.175	0.432	-0.41	.69
	Academic Source Use	1.929	1.582	1.22	.22
	Academic Source Use Quad Term	-0.557	0.388	-1.43	.15
	Direct Source Use	-1.795	1.836	-0.98	.33
	Direct Source Use Quad Term	0.431	0.388	1.11	.27

Note: * $p < .05$; ** $p < .001$

Outcome	Predictor	*B*	*SE*	*t*	*p*
Mental QOL	Online Source Use	-3.638	1.701	-2.14	.03*
	Online Source Use Quad Term	0.715	0.363	1.97	.05*
	Social Media Use	-3.638	1.701	-2.14	.03*
	Social Media Use Quad Term	0.715	0.363	1.97	.05*
Physical Symptoms					
	Information Competency	-1.06E-04	1.05E-04	-1.02	.31
	Information Competency Quad Term	4.92E-09	5.65E-09	0.87	.38
	Health Information Engagement	0.007	0.118	0.06	.96
	Health Information Engagement Quad Term	-0.002	0.006	-0.26	.80
	Health Information Apprehension	0.344	0.384	0.89	.37
	Health Information Apprehension Quad Term	0.005	0.103	0.05	.96
	Intellectual Humility	0.033	0.135	0.25	.81
	Intellectual Humility Quad Term	-3.16E-04	0.001	-0.38	.70
	News Source Use	0.157	0.236	0.67	.51
	News Source Use Quad Term	-0.014	0.066	-0.21	.84
	Academic Source Use	-0.113	0.246	-0.46	.65
	Academic Source Use Quad Term	0.044	0.061	0.72	.47
	Direct Source Use	-0.338	0.285	-1.19	.24
	Direct Source Use Quad Term	0.075	0.060	1.24	.22
	Online Source Use	0.468	0.263	1.78	.08
	Online Source Use Quad Term	-0.070	0.056	-1.25	.21
	Social Media Use	0.468	0.263	1.78	.08
	Social Media Use Quad Term	-0.070	0.056	-1.25	.21

Note: * $p < .05$; ** $p < .001$

Table 8. Effects of Information Predictors on Term GPA

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(8, 356) = 6.03$, $p < .001$, $\Delta R^2 = .12$								
	(Constant)	27.318	5.603		4.876	<.001**			
	Self-Esteem	-0.122	0.195	-0.033	-0.624	.533	-.006	-.033	-.031
	Social Desirability	-0.673	0.377	-0.095	-1.784	.075	-.082	-.094	-.089
	Age	-3.852	0.830	-0.338	-4.638	<.001**	-.215	-.239	-.231
	Sex at Birth	6.392	2.541	0.128	2.516	.012*	.075	.132	.125
	Family Income	0.978	0.333	0.171	2.940	.004*	.199	.154	.146
	Difficulty Paying Bills	-0.456	1.457	-0.018	-0.313	.754	-.121	-.017	-.016
	Student Classification	3.128	1.273	0.173	2.457	.014*	-.059	.129	.122
	Semester Credits Completed	0.001	0.001	0.036	0.679	.498	.077	.036	.034
2	$\Delta F(18, 346) = 4.03$, $p < .001$, $\Delta R^2 = .09$								
	(Constant)	23.211	7.102		3.268	.001			
	Self-Esteem	-0.121	0.197	-0.033	-0.616	.538	-.006	-.033	-.029
	Social Desirability	-0.777	0.379	-0.110	-2.053	.041*	-.082	-.110	-.098
	Age	-3.760	0.812	-0.330	-4.629	<.001**	-.215	-.241	-.221
	Sex at Birth	5.406	2.515	0.108	2.149	.032*	.075	.115	.103
	Family Income	0.846	0.324	0.148	2.614	.009*	.199	.139	.125
	Difficulty Paying Bills	-0.997	1.424	-0.040	-0.700	.484	-.121	-.038	-.033
	Student Classification	2.550	1.245	0.141	2.048	.041*	-.059	.109	.098
	Semester Credits Completed	4.95E-04	0.001	0.035	0.667	.505	.077	.036	.032
	Information Competency	0.001	2.87E-04	0.103	1.914	.056	.152	.102	.091
	Academic Information Engagement	0.514	0.278	0.099	1.849	.065	.078	.099	.088
	Academic Information Apprehension	-0.920	1.238	-0.040	-0.743	.458	-.047	-.040	-.035
	Intellectual Humility	-0.130	0.114	-0.062	-1.136	.257	.022	-.061	-.054
	News Source Use	-0.722	0.880	-0.042	-0.821	.412	.006	-.044	-.039
	Academic Source Use	3.000	0.854	0.184	3.511	.001*	.174	.185	.168
	Direct Source Use	-1.870	0.856	-0.115	-2.185	.030*	-.083	-.117	-.104
	Online Source Use	2.983	0.980	0.169	3.044	.003*	.150	.162	.145
	Social Media Use	-0.985	0.848	-0.064	-1.161	.246	-.031	-.062	-.055
	Academic Latent Class Membership	1.851	1.865	0.048	0.992	.322	.030	.053	.047

Note. * p < .05; ** p < .001

Table 9. Effects of Information Predictors on Behavioral Engagement

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	ΔF(8, 364) = 5.26, *p* < .001, ΔR2 = .11								
	(Constant)	8232.860	892.453		9.225	<.001**			
	Self-Esteem	-127.210	31.256	-0.216	-4.070	<.001**	-.250	-.211	-.204
	Social Desirability	123.070	60.545	0.109	2.033	.043*	.157	.107	.102
	Age	-70.720	133.669	-0.038	-0.529	.597	-.071	-.028	-.027
	Sex at Birth	-755.016	408.509	-0.095	-1.848	.065	-.087	-.097	-.093
	Family Income	112.066	53.360	0.123	2.100	.036*	.135	.111	.105
	Difficulty Paying Bills	-121.217	232.157	-0.031	-0.522	.602	-.118	-.028	-.026
	Student Classification	-38.538	205.094	-0.013	-0.188	.851	-.042	-.010	-.009
	Semester Credits Completed	0.097	0.120	0.043	0.809	.419	.075	.043	.041
2	ΔF(18, 346) = 5.30, p < .001, ΔR2 = .12								
	(Constant)	8173.371	1105.752		7.392	<.001**			
	Self-Esteem	-114.873	31.033	-0.195	-3.702	<.001**			
	Social Desirability	120.254	59.691	0.106	2.015	.045*	-.250	-.195	-.175
	Age	-105.904	128.893	-0.057	-0.822	.412	.157	.108	.095
	Sex at Birth	-682.540	397.861	-0.086	-1.716	.087	-.071	-.044	-.039
	Family Income	87.050	51.087	0.095	1.704	.089	-.087	-.092	-.081
	Difficulty Paying Bills	-143.555	222.549	-0.036	-0.645	.519	.135	.091	.081
	Student Classification	-72.145	197.397	-0.025	-0.365	.715	-.118	-.035	-.031
	Semester Credits Completed	0.026	0.116	0.011	0.223	.824	-.042	-.020	-.017
	Information Competency	0.220	0.045	0.259	4.889	<.001**	.075	.012	.011
	Academic Information Engagement	70.741	43.187	0.086	1.638	.102	.321	.254	.231
	Academic Information Apprehension	296.045	193.044	0.081	1.534	.126	.203	.088	.078
	Intellectual Humility	15.493	18.088	0.046	0.857	.392	-.057	.082	.073
	News Source Use	-80.574	137.961	-0.029	-0.584	.560	.165	.046	.041
	Academic Source Use	357.054	136.432	0.136	2.617	.009*	.045	-.031	-.028
	Direct Source Use	-111.768	135.138	-0.044	-0.827	.409	.157	.139	.124
	Online Source Use	-189.495	152.235	-0.068	-1.245	.214	.050	-.044	-.039
	Social Media Use	86.970	134.227	0.036	0.648	.517	-.065	-.067	-.059
	Academic Latent Class Membership	412.165	295.413	0.067	1.395	.164	-.025	.035	.031

Note. * p < .05; ** p < .001

Table 10. Effects of Information Predictors on Cognitive Engagement

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(9, 361) = 2.85$, $p = .003$, $\Delta R^2 = .07$								
	(Constant)	19.585	1.252		15.645	<.001**			
	Self-Esteem	-0.108	0.035	-0.168	-3.092	.002*	-.189	-.161	-.157
	Social Desirability	0.030	0.068	0.024	0.447	.655	.061	.024	.023
	Age	0.092	0.149	0.046	0.619	.536	.038	.033	.032
	Sex at Birth	-0.351	0.455	-0.040	-0.772	.441	-.024	-.041	-.039
	Family Income	-0.555	0.288	-0.555	-1.929	.054	.114	-.101	-.098
	Family Income -Quadratic	0.044	0.019	0.648	2.267	.024*	.133	.118	.115
	Difficulty Paying Bills	-0.262	0.259	-0.061	-1.010	.313	-.111	-.053	-.051
	Student Classification	0.059	0.229	0.019	0.259	.796	.039	.014	.013
	Semester Credits Completed	7.034E-05	1.348E-04	0.028	0.522	.602	.003	.027	.027
2	$\Delta F(21, 349) = 7.44$, $p < .001$, $\Delta R^2 = .19$								
	(Constant)	18.094	1.384		13.077	<.001**			
	Self-Esteem	-0.080	0.034	-0.124	-2.381	.018*	-.189	-.126	-.110
	Social Desirability	-0.009	0.065	-0.008	-0.145	.885	.061	-.008	-.007
	Age	0.046	0.138	0.023	0.333	.739	.038	.018	.015
	Sex at Birth	-0.179	0.424	-0.020	-0.422	.674	-.024	-.023	-.019
	Family Income	-0.481	0.264	-0.480	-1.819	.070	.114	-.097	-.084
	Family Income - Quad Term	0.037	0.018	0.545	2.077	.039*	.133	.110	.096
	Difficulty Paying Bills	-0.413	0.239	-0.095	-1.730	.085	-.111	-.092	-.080
	Student Classification	0.019	0.213	0.006	0.088	.930	.039	.005	.004
	Semester Credits Completed	3.713E-05	1.253E-04	0.015	0.296	.767	.003	.016	.014
	Information Competency	1.537E-04	4.843E-05	0.164	3.173	.002*	.310	.167	.146
	Academic Information Engagement	0.164	0.046	0.181	3.536	<.001**	.283	.186	.163
	Academic Information Apprehension	0.023	0.206	0.006	0.112	.911	-.101	.006	.005
	Intellectual Humility	0.037	0.020	0.099	1.872	.062	.249	.100	.086
	Intellectual Humility - Quad Term	0.002	0.002	0.071	1.489	.137	.092	.079	.069
	News Source Use	0.179	0.149	0.059	1.200	.231	.151	.064	.055
	Academic Source Use	0.523	0.145	0.183	3.603	<.001**	.277	.189	.166

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Direct Source Use	0.106	0.145	0.037	0.731	.465	.146	.039	.034
Online Source Use	0.187	0.166	0.060	1.131	.259	.072	.060	.052
Social Media Use	-0.053	0.144	-0.020	-0.369	.712	-.025	-.020	-.017
Academic Latent Class Membership	-0.095	0.316	-0.014	-0.301	.764	-.017	-.016	-.014

Note. * $p < .05$; ** $p < .001$

Table 11. Effects of Information Predictors on Emotional Engagement

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(8, 358) = 7.63$, $p < .001$, $\Delta R^2 = .15$								
	(Constant)	17.406	1.069		16.285	<.001**			
	Self-Esteem	-0.197	0.038	-0.272	-5.244	<.001**	-.324	-.267	-.256
	Social Desirability	0.233	0.072	0.169	3.221	.001*	.244	.168	.157
	Age	0.021	0.164	0.009	0.126	.900	-.076	.007	.006
	Sex at Birth	-0.290	0.498	-0.029	-0.583	.560	-.004	-.031	-.028
	Family Income	0.025	0.064	0.022	0.386	.699	.025	.020	.019
	Difficulty Paying Bills	-0.140	0.279	-0.029	-0.502	.616	-.077	-.027	-.025
	Student Classification	-0.447	0.247	-0.126	-1.806	.072	-.112	-.095	-.088
	Semester Credits Completed	-1.222E-05	1.435E-04	-0.004	-0.085	.932	.026	-.005	-.004
2	$\Delta F(20, 346) = 2.98$, $p < .001$, $\Delta R^2 = .08$								
	(Constant)	19.876	1.457		13.640	<.001**			
	Self-Esteem	-0.194	0.038	-0.268	-5.051	<.001**	-.324	-.262	-.239
	Social Desirability	0.207	0.073	0.150	2.822	.005*	.244	.150	.133
	Age	0.017	0.162	0.007	0.104	.917	-.076	.006	.005
	Sex at Birth	-0.393	0.497	-0.040	-0.790	.430	-.004	-.042	-.037
	Family Income	0.009	0.063	0.008	0.139	.889	.025	.007	.007
	Difficulty Paying Bills	-0.209	0.276	-0.043	-0.756	.450	-.077	-.041	-.036
	Student Classification	-0.493	0.244	-0.138	-2.017	.044*	-.112	-.108	-.095
	Semester Credits Completed	-4.223E-05	1.428E-04	-0.015	-0.296	.768	.026	-.016	-.014
	Information Competency	7.940E-05	5.633E-05	0.076	1.409	.160	.184	.076	.067
	Academic Information Engagement	0.070	0.053	0.069	1.317	.189	.188	.071	.062
	Academic Information Apprehension	0.191	0.236	0.043	0.810	.418	-.118	.044	.038
	Intellectual Humility	0.043	0.022	0.104	1.904	.058	.206	.102	.090
	News Source Use	-0.156	0.170	-0.047	-0.920	.358	.015	-.049	-.044
	Academic Source Use	0.381	0.167	0.119	2.280	.023*	.108	.122	.108
	Direct Source Use	-0.245	0.166	-0.077	-1.475	.141	.011	-.079	-.070
	Online Source Use	-0.441	0.700	-0.128	-0.630	.529	-.019	-.034	-.030
	Online Source Use - Quad	0.108	0.146	0.153	0.743	.458	.012	.040	.035

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Social Media Use	-1.313	0.596	-0.440	-2.203	.028*	-.048	-.118	-.104
Social Media Use - Quad	0.284	0.128	0.446	2.213	.028*	.003	.118	.105
Academic Latent Class Membership	-0.357	0.363	-0.048	-0.982	.327	-.054	-.053	-.046

Note. * p < .05; ** p < .001

Table 12. Effects of Information Predictors on Perceived Sense of School Membership

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(8, 347) = 14.57$, $p < .001$, $\Delta R^2 = .25$								
	(Constant)	3.446	0.160		21.539	<.001**			
	Self-Esteem	-0.049	0.006	-0.438	-8.845	<.001**	-.471	-.429	-.411
	Social Desirability	0.020	0.011	0.092	1.837	.067	.240	.098	.085
	Age	-0.051	0.025	-0.143	-2.066	.040	-.117	-.110	-.096
	Sex at Birth	-0.004	0.072	-0.002	-0.051	.959	.004	-.003	-.002
	Family Income	0.001	0.009	0.005	0.098	.922	.029	.005	.005
	Difficulty Paying Bills	-0.028	0.042	-0.036	-0.659	.511	-.087	-.035	-.031
	Student Classification	0.028	0.038	0.050	0.744	.457	-.050	.040	.035
	Semester Credits Completed	2.421E-05	2.116E-05	0.056	1.144	.253	.100	.061	.053
2	$\Delta F(20, 335) = 5.72$, $p < .001$, $\Delta R^2 = .13$								
	(Constant)	3.708	0.205		18.080	.000			
	Self-Esteem	-0.047	0.005	-0.413	-8.549	<.001**	-.471	-.423	-.368
	Social Desirability	0.016	0.010	0.075	1.543	.124	.240	.084	.066
	Age	-0.040	0.023	-0.112	-1.698	.091	-.117	-.092	-.073
	Sex at Birth	-0.034	0.069	-0.022	-0.486	.627	.004	-.027	-.021
	Family Income	-3.068E-04	0.009	-0.002	-0.034	.973	.029	-.002	-.001
	Difficulty Paying Bills	-0.031	0.040	-0.041	-0.782	.435	-.087	-.043	-.034
	Student Classification	-0.002	0.036	-0.003	-0.046	.964	-.050	-.002	-.002
	Semester Credits Completed	2.522E-05	2.014E-05	0.058	1.252	.211	.100	.068	.054
	Information Competency	3.355E-05	8.858E-06	0.208	3.787	<.001**	.295	.203	.163
	Information Competency - Quad	-3.790E-09	1.661E-09	-0.115	-2.282	.023*	.042	-.124	-.098
	Academic Information Engagement	0.018	0.008	0.113	2.375	.018	.242	.129	.102
	Academic Information Apprehension	0.018	0.033	0.026	0.535	.593	-.187	.029	.023
	Intellectual Humility	0.009	0.003	0.136	2.724	.007*	.284	.147	.117
	News Source Use	-0.019	0.024	-0.036	-0.785	.433	.017	-.043	-.034
	Academic Source Use	0.019	0.024	0.038	0.799	.425	.063	.044	.034
	Direct Source Use	-0.021	0.024	-0.042	-0.878	.381	.079	-.048	-.038
	Online Source Use	0.042	0.027	0.079	1.576	.116	.065	.086	.068

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Social Media Use	-0.119	0.080	-0.256	-1.501	.134	.043	-.082	-.065
Social Media Use - Quad	0.030	0.017	0.303	1.793	.074	.083	.098	.077
Academic Latent Class Membership	-0.101	0.052	-0.086	-1.947	.052	-.096	-.106	-.084

Note. * $p < .05$; ** $p < .001$

Table 13. Effects of Information Predictors on Physical Quality of Life

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(6, 365) = 2.15$, $p = .047$, $\Delta R^2 = .03$								
	(Constant)	171638.837	15669.396		10.954	<.001**			
	Self-Esteem	695.244	619.196	0.061	1.123	.262	.082	.059	.058
	Social Desirability	-1968.691	1193.141	-0.090	-1.650	.100	-.114	-.086	-.085
	Age	335.521	1852.421	0.009	0.181	.856	.007	.009	.009
	Sex at Birth	6876.816	8052.900	0.045	0.854	.394	.032	.045	.044
	Family Income	1838.329	1043.240	0.106	1.762	.079	.131	.092	.091
	Difficulty Paying Bills	-3045.334	4591.506	-0.040	-0.663	.508	-.086	-.035	-.034
2	$\Delta F(16, 355) = 3.91$, $p < .001$, $\Delta R^2 = .10$								
	(Constant)	155794.321	20494.811		7.602	<.001**			
	Self-Esteem	1037.860	627.325	0.092	1.654	.099	.082	.087	.082
	Social Desirability	-2306.581	1222.230	-0.106	-1.887	.060	-.114	-.100	-.093
	Age	169.372	1848.743	0.005	0.092	.927	.007	.005	.005
	Sex at Birth	6331.611	7973.105	0.041	0.794	.428	.032	.042	.039
	Family Income	2002.400	1021.375	0.115	1.960	.051	.131	.103	.097
	Difficulty Paying Bills	-3892.961	4444.110	-0.051	-0.876	.382	-.086	-.046	-.043
	Information Competency	0.433	0.909	0.026	0.476	.634	.120	.025	.024
	Health Information Engagement	2556.709	912.885	0.152	2.801	.005*	.171	.147	.139
	Health Information Apprehension	1357.520	3910.314	0.020	0.347	.729	.003	.018	.017
	Intellectual Humility	1167.099	366.031	0.180	3.189	.002*	.204	.167	.158
	News Source Use	-4288.356	2773.802	-0.082	-1.546	.123	-.082	-.082	-.077
	Academic Source Use	-1385.535	2751.661	-0.027	-0.504	.615	.021	-.027	-.025
	Direct Source Use	1565.261	2753.510	0.031	0.568	.570	.066	.030	.028
	Online Source Use	5369.912	3005.227	0.099	1.787	.075	.128	.094	.088
	Social Media Use	-569.279	2633.441	-0.012	-0.216	.829	.016	-.011	-.011
	Academic Latent Class Membership	7643.211	7530.099	0.051	1.015	.311	.055	.054	.050

Note. * p < .05; ** p < .001

Table 14. Effects of Information Predictors on Mental Quality of Life

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(6, 365) = 36.65$, $p < .001$, $\Delta R^2 = .38$								
	(Constant)	44.385	2.658		16.699	<.001**			
	Self-Esteem	-1.122	0.105	-0.469	-10.680	<.001**	-.550	-.488	-.442
	Social Desirability	0.943	0.202	0.205	4.659	<.001**	.366	.237	.193
	Age	-0.790	0.314	-0.106	-2.513	.012*	-.098	-.130	-.104
	Sex at Birth	3.471	1.366	0.107	2.541	.011*	.120	.132	.105
	Family Income	-0.291	0.177	-0.079	-1.644	.101	-.016	-.086	-.068
	Difficulty Paying Bills	-2.092	0.779	-0.131	-2.685	.008*	-.142	-.139	-.111
2	$\Delta F(17, 354) = 1.67$, $p = 0.78$, $\Delta R^2 = .03$								
	(Constant)	50.573	3.749		13.492	<.001**			
	Self-Esteem	-1.116	0.110	-0.467	-10.175	<.001**	-.550	-.476	-.417
	Social Desirability	0.932	0.213	0.203	4.370	<.001**	.366	.226	.179
	Age	-0.905	0.323	-0.121	-2.805	.005*	-.098	-.147	-.115
	Sex at Birth	3.695	1.392	0.114	2.655	.008*	.120	.140	.109
	Family Income	-0.335	0.178	-0.091	-1.880	.061	-.016	-.099	-.077
	Difficulty Paying Bills	-2.025	0.776	-0.126	-2.610	.009*	-.142	-.137	-.107
	Information Competency	1.729E-05	1.590E-04	0.005	0.109	.913	.057	.006	.004
	Health Information Engagement	-0.196	0.160	-0.055	-1.228	.220	-.003	-.065	-.050
	Health Information Apprehension	-0.756	0.683	-0.052	-1.107	.269	-.222	-.059	-.045
	Intellectual Humility	-0.116	0.064	-0.085	-1.802	.072	.017	-.095	-.074
	News Source Use	-0.914	0.485	-0.082	-1.884	.060	-.049	-.100	-.077
	Academic Source Use	0.607	0.481	0.057	1.263	.208	-.052	.067	.052
	Direct Source Use	-0.125	0.481	-0.012	-0.259	.796	-.007	-.014	-.011
	Online Source Use	-1.026	0.524	-0.090	-1.956	.051	-.130	-.103	-.080
	Social Media Use	-2.574	1.586	-0.260	-1.623	.106	-.040	-.086	-.066
	Social Media Use - Quad	0.602	0.337	0.285	1.787	.075	-.013	.095	.073
	Health Latent Class Membership	-0.896	1.315	-0.028	-0.681	.496	-.029	-.036	-.028

Note. * p < .05; ** p < .001

Table 15. Effects of Information Predictors on Physical Symptoms

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(6, 341) = 13.29$, $p < .001$, $\Delta R^2 = .19$								
	(Constant)	3.740	0.454		8.232	<.001**			
	Self-Esteem	0.110	0.018	0.314	6.066	<.001**	.360	.312	.296
	Social Desirability	-0.046	0.035	-0.068	-1.312	.191	-.179	-.071	-.064
	Age	0.021	0.055	0.019	0.386	.700	.006	.021	.019
	Sex at Birth	-0.977	0.237	-0.205	-4.121	<.001**	-.215	-.218	-.201
	Family Income	0.012	0.030	0.022	0.389	.697	-.054	.021	.019
	Difficulty Paying Bills	0.320	0.133	0.139	2.412	.016*	.155	.129	.118
2	$\Delta F(16, 331) = 1.32$, $p = 0.22$, $\Delta R^2 = .03$								
	(Constant)	3.008	0.616		4.886	<.001**			
	Self-Esteem	0.114	0.019	0.325	5.971	<.001**	.360	.312	.290
	Social Desirability	-0.030	0.037	-0.044	-0.807	.420	-.179	-.044	-.039
	Age	0.027	0.057	0.025	0.482	.630	.006	.027	.023
	Sex at Birth	-0.951	0.243	-0.199	-3.919	<.001**	-.215	-.211	-.190
	Family Income	0.017	0.030	0.032	0.556	.579	-.054	.031	.027
	Difficulty Paying Bills	0.319	0.133	0.139	2.398	.017*	.155	.131	.116
	Information Competency	2.265E-05	2.711E-05	0.046	0.835	.404	-.050	.046	.041
	Health Information Engagement	-0.006	0.028	-0.012	-0.219	.827	-.053	-.012	-.011
	Health Information Apprehension	0.046	0.118	0.021	0.389	.697	.156	.021	.019
	Intellectual Humility	-0.012	0.011	-0.063	-1.139	.255	-.120	-.063	-.055
	News Source Use	0.211	0.083	0.131	2.535	.012*	.109	.138	.123
	Academic Source Use	-0.005	0.082	-0.003	-0.062	.950	.049	-.003	-.003
	Direct Source Use	0.003	0.083	0.002	0.033	.974	.019	.002	.002
	Online Source Use	-0.003	0.090	-0.002	-0.036	.971	.044	-.002	-.002
	Social Media Use	0.121	0.078	0.085	1.542	.124	.114	.084	.075
	Academic Latent Class Membership	0.035	0.224	0.008	0.156	.876	.013	.009	.008

Note. * p < .05; ** p < .001

Table 16. Logistic Regression of Information Predictors Predicting Health Latent Class Membership

							95% C.I.for EXP(B)	
		B	S.E.	Wald	df	*p*	OR	Lower	Upper
Block 1	$X^2(8, N = 372) = 6.83$, $p = .34$; Nagelkerke R = .03								
	Self-esteem	-0.011	0.028	0.149	1	.699	0.989	0.937	1.044
	Social Desirability	-0.055	0.053	1.076	1	.300	0.947	0.854	1.050
	Age	-0.127	0.094	1.846	1	.174	0.880	0.733	1.058
	Sex	-0.533	0.408	1.701	1	.192	0.587	0.264	1.307
	Family Income	0.043	0.046	0.878	1	.349	1.044	0.954	1.142
	Difficulty paying bills	0.071	0.201	0.126	1	.723	1.074	0.725	1.592
	Constant	0.571	1.839	0.097	1	.756	1.771		
Block 2	$X^2(8, N = 372) = 6.12$, $p = .73$; Nagelkerke R = .06								
	Self-esteem	-0.008	0.029	0.069	1	.794	0.992	0.937	1.051
	Social Desirability	-0.042	0.057	0.548	1	.459	0.959	0.858	1.072
	Age	-0.156	0.097	2.604	1	.107	0.855	0.707	1.034
	Sex	-0.476	0.421	1.281	1	.258	0.621	0.272	1.417
	Family Income	0.038	0.047	0.655	1	.418	1.039	0.947	1.139
	Difficulty Paying Bills	0.051	0.206	0.061	1	.805	1.052	0.703	1.574
	Information Competency	2.13E-05	4.06E-05	0.274	1	.601	1.000	1.000	1.000
	Academic Information Engagement	0.004	0.043	0.008	1	.927	1.004	0.924	1.091
	Academic Information Apprehension	-0.087	0.182	0.231	1	.630	0.916	0.642	1.308
	Intellectual Humility	-0.026	0.017	2.284	1	.131	0.975	0.943	1.008
	News Source Use	-0.231	0.131	3.088	1	.079	0.794	0.614	1.027
	Academic Source Use	0.152	0.127	1.441	1	.230	1.165	0.908	1.494
	Direct Source Use	0.086	0.129	0.441	1	.507	1.090	0.846	1.404
	Online Source Use	0.030	0.142	0.046	1	.830	1.031	0.781	1.361
	Social Media Source Use	0.025	0.124	0.042	1	.838	1.026	0.804	1.308
	Constant	0.880	1.950	0.204	1	.652	2.410		

Note. * p < .05; ** p < .001

Table 17. Logistic Regression of Information Predictors Predicting Academic Latent Class Membership

							95% C.I.for EXP(B)	
		B	S.E.	Wald	df	*p*	OR	Lower	Upper
Block 1	$X^2(8, N = 374) = 3.60$, $p = .89$; Nagelkerke R = .01								
	Self-esteem	0.015	0.021	0.480	1	.488	1.015	0.973	1.058
	Social Desirability	0.027	0.041	0.419	1	.517	1.027	0.947	1.113
	Age	-0.001	0.091	1.67E-04	1	.990	0.999	0.835	1.194
	Sex	-0.168	0.277	0.365	1	.546	0.846	0.491	1.457
	Family Income	-0.039	0.036	1.158	1	.282	0.962	0.896	1.033
	Difficulty paying bills	-0.186	0.158	1.381	1	.240	0.830	0.608	1.132
	Student Classification	0.072	0.140	0.268	1	.605	1.075	0.817	1.414
	Semester Credits Completed	6.11E-05	8.18E-05	0.558	1	.455	1.000	1.000	1.000
	Constant	0.427	1.729	0.061	1	.805	1.532		
Block 2	$X^2(9, N = 374) = 10.23$, $p = .33$; Nagelkerke R = .05								
	Self-esteem	0.004	0.023	0.033	1	.855	1.004	0.961	1.049
	Social Desirability	0.039	0.044	0.808	1	.369	1.040	0.955	1.133
	Age	-0.003	0.094	0.001	1	.977	0.997	0.829	1.199
	Sex	-0.172	0.290	0.353	1	.552	0.842	0.477	1.485
	Family Income	-0.040	0.037	1.146	1	.284	0.961	0.894	1.034
	Difficulty Paying Bills	-0.208	0.163	1.624	1	.203	0.812	0.590	1.118
	Student Classification	0.100	0.144	0.478	1	.489	1.105	0.833	1.464
	Semester Credits Completed	7.70E-05	8.47E-05	0.826	1	.364	1.000	1.000	1.000
	Information Competency	4.14E-06	3.30E-05	0.016	1	.900	1.000	1.000	1.000
	Academic Information Engagement	-0.025	0.031	0.635	1	.426	0.975	0.917	1.037
	Academic Information Apprehension	0.284	0.140	4.125	1	.042*	1.329	1.010	1.748
	Intellectual Humility	0.001	0.013	0.012	1	.912	1.001	0.976	1.028
	News Source Use	0.098	0.100	0.954	1	.329	1.103	0.906	1.343
	Academic Source Use	-0.066	0.099	0.447	1	.504	0.936	0.771	1.136
	Direct Source Use	0.107	0.099	1.153	1	.283	1.112	0.916	1.351
	Online Source Use	0.121	0.112	1.160	1	.282	1.129	0.906	1.407
	Social Media Source Use	-0.189	0.098	3.681	1	.055	0.828	0.683	1.004
	Constant	0.308	1.828	0.028	1	.866	1.360		

Note. * p < .05; ** p < .001

Table 18. Logistic Regression Analysis of Information Predictors Predicting During Study Search Behaviors for Health Topic

							95% C.I.for EXP(B)	
		B	S.E.	Wald	df	*p*	OR	Lower	Upper
Block 1	$X^2(6, N = 497) = 16.55$, $p = .01$; Nagelkerke R = .08								
	Self-esteem	0.055	0.030	3.253	1	.071	1.056	0.995	1.121
	Social Desirability	0.203	0.061	10.914	1	.001*	1.225	1.086	1.381
	Age	-0.097	0.096	1.007	1	.316	0.908	0.751	1.097
	Sex	-0.081	0.391	0.043	1	.836	0.922	0.429	1.984
	Family Income	-0.051	0.051	0.988	1	.320	0.950	0.860	1.051
	Difficulty paying bills	0.141	0.225	0.392	1	.531	1.151	0.741	1.790
	Constant	0.131	1.924	0.005	1	.946	1.140		
Block 2	$X^2(10, N = 497) = 9.74$, $p = .46$; Nagelkerke R = .12								
	Self-esteem	0.059	0.032	3.352	1	.067	1.061	0.996	1.130
	Social Desirability	0.221	0.067	10.896	1	.001*	1.247	1.094	1.422
	Age	-0.131	0.101	1.666	1	.197	0.878	0.720	1.070
	Sex	-0.011	0.404	0.001	1	.979	0.989	0.448	2.184
	Family Income	-0.037	0.052	0.504	1	.478	0.963	0.869	1.068
	Difficulty Paying Bills	0.127	0.228	0.310	1	.578	1.135	0.726	1.776
	Information Competency	-4.25E-05	4.72E-05	0.814	1	.367	1.000	1.000	1.000
	Health Information Engagement	0.070	0.047	2.232	1	.135	1.073	0.978	1.176
	Health Information Apprehension	0.162	0.199	0.661	1	.416	1.175	0.796	1.735
	Intellectual Humility	-0.008	0.019	0.173	1	.678	0.992	0.955	1.030
	News Source Use	0.001	0.143	7.81E-05	1	.993	1.001	0.756	1.326
	Academic Source Use	0.043	0.140	0.093	1	.760	1.044	0.794	1.372
	Direct Source Use	0.225	0.143	2.466	1	.116	1.253	0.946	1.659
	Online Source Use	0.078	0.158	0.241	1	.623	1.081	0.793	1.473
	Social Media Source Use	-0.159	0.133	1.432	1	.231	0.853	0.657	1.107
	Health Latent Class Membership	-0.673	0.450	2.238	1	.135	0.510	0.211	1.232
	Constant	1.003	2.148	0.218	1	.640	2.727		

Note. * p < .05; ** p < .001

Table 19. Information Predictors Predicting During Study Search Behaviors for Academic Topic

							95% C.I.for EXP(B)	
		B	S.E.	Wald	df	*p*	OR	Lower	Upper
Block 1	$X^2(8, N = 497) = 32.94$, $p < .001$; Nagelkerke R = .16								
	Self-esteem	0.070	0.031	5.035	1	.025*	1.072	1.009	1.140
	Social Desirability	0.210	0.062	11.637	1	.001*	1.234	1.094	1.392
	Age	-0.344	0.146	5.544	1	.019*	0.709	0.533	0.944
	Sex	-0.058	0.395	0.021	1	.884	0.944	0.435	2.049
	Family Income	-0.027	0.052	0.283	1	.594	0.973	0.879	1.076
	Difficulty paying bills	0.412	0.228	3.259	1	.071	1.510	0.965	2.361
	Student Classification	0.074	0.200	0.138	1	.710	1.077	0.728	1.593
	Semester Credits Completed	-4.09E-04	1.20E-04	11.620	1	.001*	1.000	0.999	1.000
	Constant	4.922	2.725	3.261	1	.071	137.217		
Block 2	$X^2(8, N = 497) = 20.88$, $p = .02$; Nagelkerke R = .25								
	Self-esteem	0.080	0.038	4.515	1	.034*	1.084	1.006	1.167
	Social Desirability	0.245	0.075	10.538	1	.001*	1.277	1.102	1.481
	Age	-0.470	0.171	7.591	1	.006*	0.625	0.447	0.873
	Sex	0.005	0.445	1.41E-04	1	.991	1.005	0.420	2.404
	Family Income	-0.091	0.058	2.398	1	.121	0.913	0.815	1.024
	Difficulty Paying Bills	0.166	0.249	0.444	1	.505	1.180	0.725	1.923
	Student Classification	0.315	0.239	1.741	1	.187	1.371	0.858	2.190
	Semester Credits Completed	-0.001	1.43E-04	13.691	1	<.001**	0.999	0.999	1.000
	Information Competency	-2.61E-06	5.11E-05	0.003	1	.959	1.000	1.000	1.000
	Academic Information Engagement	0.050	0.051	0.938	1	.333	1.051	0.950	1.162
	Academic Information Apprehension	0.666	0.229	8.451	1	.004*	1.946	1.242	3.048
	Intellectual Humility	0.010	0.022	0.198	1	.657	1.010	0.967	1.056
	News Source Use	0.036	0.159	0.051	1	.821	1.037	0.759	1.415
	Academic Source Use	0.184	0.158	1.361	1	.243	1.202	0.882	1.638
	Direct Source Use	0.015	0.151	0.010	1	.918	1.016	0.755	1.365
	Online Source Use	0.017	0.183	0.009	1	.926	1.017	0.710	1.457
	Social Media Source Use	-0.153	0.155	0.987	1	.320	0.858	0.634	1.161
	Academic Latent Class Membership	-1.008	0.358	7.912	1	.005*	0.365	0.181	0.737
	Constant	9.410	3.309	8.086	1	.004	12205.471		

Note: * p < .05; ** p < .001

Table 20. Hierarchical Multiple Regression Analysis Examining Intellectual Humility Moderation Effects on GPA

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(5, 370) = 9.92$, $p < .001$, $\Delta R^2 = .12$								
	(Constant)	27.870	3.119		8.936	<.001**			
	Social Desirability	-0.584	0.348	-0.083	-1.679	.094	-.085	-.087	-.082
	Age	-4.040	0.773	-0.360	-5.229	<.001**	-.223	-.262	-.255
	Sex at Birth	6.023	2.498	0.120	2.412	.016*	.073	.124	.118
	Family Income	0.977	0.280	0.171	3.490	.001*	.192	.179	.170
	Student Classification	3.265	1.235	0.181	2.644	.009*	-.059	.136	.129
2	$\Delta F(15, 360) = 4.23$, $p < .001$, $\Delta R^2 = .09$								
	(Constant)	21.824	5.298		4.120	<.001**			
	Social Desirability	-0.690	0.354	-0.098	-1.950	.052	-.085	-.102	-.091
	Age	-3.919	0.757	-0.349	-5.177	<.001**	-.223	-.263	-.242
	Sex at Birth	5.220	2.473	0.104	2.111	.035*	.073	.111	.099
	Family Income	0.938	0.273	0.165	3.443	.001*	.192	.179	.161
	Student Classification	2.639	1.208	0.146	2.185	.030*	-.059	.114	.102
	Information Competency	0.001	2.80E-04	0.100	1.924	.055	.151	.101	.090
	Academic Information Engagement	0.547	0.266	0.106	2.055	.041*	.090	.108	.096
	Academic Information Apprehension	-1.134	1.183	-0.049	-0.959	.338	-.047	-.050	-.045
	Intellectual Humility	-0.134	0.111	-0.064	-1.207	.228	.027	-.063	-.057
	News Source Use	-0.869	0.859	-0.050	-1.011	.312	.000	-.053	-.047
	Academic Source Use	3.113	0.825	0.192	3.771	<.001**	.172	.195	.177
	Direct Source Use	-1.662	0.828	-0.103	-2.007	.046*	-.061	-.105	-.094
	Online Source Use	2.823	0.932	0.163	3.030	.003*	.163	.158	.142
	Social Media Use	-0.982	0.817	-0.064	-1.203	.230	-.033	-.063	-.056
	Academic Latent Class Membership	1.784	1.818	0.047	0.981	.327	.023	.052	.046

Note: * p < .05; ** p < .001

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
3	$\Delta F(24, 351) = 1.32$, $p = .22$, $\Delta R^2 = .03$								
	(Constant)	21.390	5.379		3.977	<.001**			
	Social Desirability	-0.702	0.355	-0.099	-1.979	.049*	-.085	-.105	-.092
	Age	-3.805	0.761	-0.339	-5.001	<.001**	-.223	-.258	-.233
	Sex at Birth	4.987	2.476	0.099	2.014	.045*	.073	.107	.094
	Family Income	0.997	0.280	0.175	3.559	<.001**	.192	.187	.166
	Student Classification	2.449	1.216	0.136	2.014	.045*	-.059	.107	.094
	Information Competency	0.001	2.83E-04	0.107	2.029	.043*	.151	.108	.095
	Academic Information Engagement	0.562	0.275	0.109	2.046	.042*	.090	.109	.095
	Academic Information Apprehension	-1.226	1.203	-0.053	-1.019	.309	-.047	-.054	-.048
	Intellectual Humility	-0.714	0.498	-0.342	-1.432	.153	.027	-.076	-.067
	News Source Use	-1.134	0.886	-0.066	-1.281	.201	.000	-.068	-.060
	Academic Source Use	3.102	0.835	0.191	3.714	<.001**	.172	.194	.173
	Direct Source Use	-1.598	0.837	-0.099	-1.909	.057	-.061	-.101	-.089
	Online Source Use	3.158	0.975	0.182	3.240	.001*	.163	.170	.151
	Social Media Use	-1.302	0.850	-0.085	-1.531	.127	-.033	-.081	-.071
	Academic Latent Class Membership	1.969	1.833	0.051	1.074	.284	.023	.057	.050
	Competency X Intellectual Humility Interaction	2.47E-05	3.05E-05	0.043	0.810	.418	.077	.043	.038
	Information Engagement X Intellectual Humility Interaction	0.058	0.028	0.106	2.066	.040*	.099	.110	.096
	Information Apprehension X Intellectual Humility	0.092	0.132	0.036	0.696	.487	.011	.037	.032
	News Use X Intellectual Humility Interaction	0.039	0.097	0.037	0.406	.685	.021	.022	.019

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Academic Use X Intellectual Humility Interaction	0.040	0.087	0.044	0.464	.643	.058	.025	.022
Direct Use X Intellectual Humility Interaction	-0.118	0.095	-0.158	-1.241	.215	.020	-.066	-.058
Online Use X Intellectual Humility Interaction	0.026	0.100	0.035	0.257	.797	.033	.014	.012
Social Media X Intellectual Humility Interaction	0.133	0.087	0.184	1.533	.126	.029	.082	.071
Academic LC Membership X Intellectual Humility Interaction	0.232	0.207	0.173	1.121	.263	.042	.060	.052

Note. * $p < .05$; ** $p < .001$

Table 21. Hierarchical Multiple Regression Analysis Examining Intellectual Humility Moderation Effects on Behavioral Engagement

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(2, 369) = 17.12$, $p < .001$, $\Delta R^2 = .09$								
	(Constant)	8048.083	369.957		21.754	<.001**			
	Self-Esteem	-156.460	29.612	-0.263	-5.284	<.001**	-.265	-.265	-.263
	Family Income	111.012	46.051	0.120	2.411	.016*	.125	.125	.120
2	$\Delta F(12, 359) = 5.34$, $p < .001$, $\Delta R^2 = .012$								
	(Constant)	7602.920	800.903		9.493	<.001**			
	Self-Esteem	-143.504	29.830	-0.241	-4.811	<.001**	-.265	-.246	-.227
	Family Income	95.759	44.423	0.104	2.156	.032*	.125	.113	.102
	Information Competency	0.205	0.045	0.240	4.580	<.001**	.321	.235	.216
	Academic Information Engagement	79.103	42.801	0.095	1.848	.065	.199	.097	.087
	Academic Information Apprehension	298.544	191.795	0.080	1.557	.120	-.056	.082	.073
	Intellectual Humility	22.065	18.008	0.066	1.225	.221	.172	.065	.058
	News Source Use	-107.628	137.650	-0.039	-0.782	.435	.028	-.041	-.037
	Academic Source Use	329.123	134.845	0.124	2.441	.015*	.150	.128	.115
	Direct Source Use	-56.450	133.493	-0.022	-0.423	.673	.066	-.022	-.020
	Online Source Use	-220.516	149.988	-0.078	-1.470	.142	-.056	-.077	-.069
	Social Media Use	95.245	133.772	0.038	0.712	.477	-.016	.038	.034
	Academic Latent Class Membership	426.281	296.122	0.069	1.440	.151	.055	.076	.068
3	$\Delta F(21, 350) = 0.68$, $p = .73$, $\Delta R^2 = .01$								
	(Constant)	7674.423	817.866		9.383	<.001**			
	Self-Esteem	-147.174	30.364	-0.248	-4.847	<.001**	-.265	-.251	-.229
	Family Income	86.547	45.821	0.094	1.889	.060	.125	.100	.089
	Information Competency	0.212	0.046	0.248	4.636	<.001**	.321	.241	.219
	Academic Information Engagement	68.081	44.707	0.082	1.523	.129	.199	.081	.072
	Academic Information Apprehension	352.525	197.341	0.095	1.786	.075	-.056	.095	.084
	Intellectual Humility	27.679	81.738	0.082	0.339	.735	.172	.018	.016
	News Source Use	-159.111	143.475	-0.057	-1.109	.268	.028	-.059	-.052
	Academic Source Use	358.984	138.326	0.135	2.595	.010*	.150	.137	.123
	Direct Source Use	-82.829	136.431	-0.032	-0.607	.544	.066	-.032	-.029

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Online Source Use	-144.480	158.564	-0.051	-0.911	.363	-.056	-.049	-.043
Social Media Use	66.809	140.422	0.027	0.476	.635	-.016	.025	.023
Academic Latent Class Membership	382.982	301.169	0.062	1.272	.204	.055	.068	.060
Competency X Intellectual Humility Interaction	0.002	0.005	0.027	0.507	.613	.066	.027	.024
Information Engagement X Intellectual Humility Interaction	-0.389	4.578	-0.004	-0.085	.932	.019	-.005	-.004
Information Apprehension X Intellectual Humility	-31.608	21.325	-0.078	-1.482	.139	-.130	-.079	-.070
News Use X Intellectual Humility Interaction	25.101	15.583	0.145	1.611	.108	.171	.086	.076
Academic Use X Intellectual Humility Interaction	-9.953	14.320	-0.067	-0.695	.488	.158	-.037	-.033
Direct Use X Intellectual Humility Interaction	-5.985	15.344	-0.050	-0.390	.697	.172	-.021	-.018
Online Use X Intellectual Humility Interaction	-15.554	16.442	-0.131	-0.946	.345	.144	-.051	-.045
Social Media X Intellectual Humility Interaction	4.826	14.397	0.042	0.335	.738	.157	.018	.016
Academic LC Membership X Intellectual Humility Interaction	9.344	33.829	0.043	0.276	.783	.168	.015	.013

Note. * $p < .05$; ** $p < .001$

Table 22. Hierarchical Multiple Regression Analysis Examining Intellectual Humility Moderation Effects on Cognitive Engagement

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(2, 376) = 10.42$, $p < .001$, $\Delta R^2 = .05$								
	(Constant)	17.365	0.407		42.638	<.001**			
	Self-Esteem	-0.134	0.032	-0.207	-4.120	<.001**	-.208	-.208	-.207
	Family Income	0.097	0.051	0.096	1.911	.057	.099	.098	.096
2	$\Delta F(12, 366) = 8.73$, $p < .001$, $\Delta R2 = .18$								
	(Constant)	15.527	0.868		17.892	<.001**			
	Self-Esteem	-0.111	0.032	-0.171	-3.434	<.001**	-.208	-.179	-.157
	Family Income	0.111	0.048	0.110	2.303	.022*	.099	.121	.105
	Information Competency	0.000	0.000	0.177	3.394	<.001**	.315	.177	.155
	Academic Information Engagement	0.122	0.047	0.133	2.577	.010*	.280	.135	.118
	Academic Information Apprehension	0.102	0.208	0.025	0.492	.623	-.103	.026	.022
	Intellectual Humility	0.242	0.087	0.655	2.789	.006*	.257	.146	.128
	News Source Use	0.130	0.152	0.043	0.857	.392	.127	.045	.039
	Academic Source Use	0.558	0.146	0.194	3.831	<.001**	.271	.199	.175
	Direct Source Use	0.159	0.145	0.056	1.098	.273	.166	.058	.050
	Online Source Use	0.135	0.171	0.043	0.792	.429	.080	.042	.036
	Social Media Use	-0.037	0.149	-0.014	-0.251	.802	-.010	-.013	-.011
	Academic Latent Class Membership	-0.076	0.318	-0.011	-0.238	.812	-.014	-.013	-.011
3	$\Delta F(20, 358) = 0.61$, $p = .79$, $\Delta R2 = .01$								
	(Constant)	15.527	0.868		17.892	<.001**			
	Self-Esteem	-0.111	0.032	-0.171	-3.434	.001*	-.208	-.179	-.157
	Family Income	0.111	0.048	0.110	2.303	.022*	.099	.121	.105
	Information Competency	1.66E-04	4.90E-05	0.177	3.394	.001*	.315	.177	.155
	Academic Information Engagement	0.122	0.047	0.133	2.577	.010*	.280	.135	.118
	Academic Information Apprehension	0.102	0.208	0.025	0.492	.623	-.103	.026	.022
	Intellectual Humility	0.242	0.087	0.655	2.789	.006*	.257	.146	.128
	News Source Use	0.130	0.152	0.043	0.857	.392	.127	.045	.039
	Academic Source Use	0.558	0.146	0.194	3.831	<.001**	.271	.199	.175

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Note: * p < .05; ** p < .001								
Direct Source Use	0.159	0.145	0.056	1.098	.273	.166	.058	.050
Online Source Use	0.135	0.171	0.043	0.792	.429	.080	.042	.036
Social Media Use	-0.037	0.149	-0.014	-0.251	.802	-.010	-.013	-.011
Academic Latent Class Membership	-0.076	0.318	-0.011	-0.238	.812	-.014	-.013	-.011
Competency X Intellectual Humility Interaction	6.68E-06	5.20E-06	0.068	1.283	.200	.081	.068	.059
Information Engagement X Intellectual Humility Interaction	0.002	0.005	0.024	0.484	.628	.025	.026	.022
Information Apprehension X Intellectual Humility	0.037	0.023	0.083	1.620	.106	-.019	.085	.074
News Use X Intellectual Humility Interaction	0.009	0.016	0.047	0.553	.581	.198	.029	.025
Academic Use X Intellectual Humility Interaction	-0.016	0.015	-0.100	-1.075	.283	.207	-.057	-.049
Direct Use X Intellectual Humility Interaction	-0.009	0.016	-0.071	-0.573	.567	.236	-.030	-.026
Online Use X Intellectual Humility Interaction	-0.012	0.018	-0.094	-0.703	.483	.213	-.037	-.032
Social Media X Intellectual Humility Interaction	-0.008	0.015	-0.061	-0.513	.608	.209	-.027	-.023
Academic LC Membership X Intellectual Humility Interaction	-0.069	0.036	-0.293	-1.926	.055	.225	-.101	-.088

Note. * p < .05; ** p < .001

Table 23. Hierarchical Multiple Regression Analysis Examining Intellectual Humility Moderation Effects on Emotional Engagement

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(2, 380) = 27.89$, $p < .001$, $\Delta R^2 = .13$								
	(Constant)	16.361	0.179		91.441	<.001**			
	Self-Esteem	-0.199	0.037	-0.273	-5.416	<.001**	-.323	-.268	-.259
	Social Desirability	0.224	0.070	0.162	3.210	.001*	.246	.163	.154
2	$\Delta F(12, 370) = 2.74$, $p = .003$, $\Delta R^2 = .06$								
	(Constant)	17.172	0.833		20.603	<.001**			
	Self-Esteem	-0.201	0.038	-0.276	-5.333	<.001**	-.323	-.267	-.250
	Family Income	0.179	0.071	0.129	2.510	.013*	.246	.129	.118
	Information Competency	9.29E-05	5.53E-05	0.088	1.681	.094	.196	.087	.079
	Academic Information Engagement	0.072	0.052	0.071	1.390	.165	.179	.072	.065
	Academic Information Apprehension	0.170	0.231	0.038	0.734	.463	-.132	.038	.034
	Intellectual Humility	0.054	0.022	0.131	2.453	.015*	.217	.126	.115
	News Source Use	-0.077	0.164	-0.023	-0.468	.640	.035	-.024	-.022
	Academic Source Use	0.299	0.160	0.094	1.861	.064	.111	.096	.087
	Direct Source Use	-0.196	0.158	-0.062	-1.236	.217	.004	-.064	-.058
	Online Source Use	0.037	0.179	0.011	0.205	.838	-.008	.011	.010
	Social Media Use	-0.048	0.157	-0.016	-0.307	.759	-.053	-.016	-.014
	Academic Latent Class Membership	-0.460	0.354	-0.062	-1.301	.194	-.064	-.067	-.061
3	$\Delta F(21, 361) = 0.30$, $p = .97$, $\Delta R^2 = .006$								
	(Constant)	16.969	0.869		19.537	<.001**			
	Self-Esteem	-0.199	0.039	-0.273	-5.164	<.001**	-.323	-.262	-.244
	Family Income	0.182	0.073	0.132	2.506	.013*	.246	.131	.118
	Information Competency	9.06E-05	5.66E-05	0.086	1.602	.110	.196	.084	.076
	Academic Information Engagement	0.070	0.054	0.069	1.294	.196	.179	.068	.061
	Academic Information Apprehension	0.180	0.239	0.041	0.755	.451	-.132	.040	.036
	Intellectual Humility	0.134	0.101	0.324	1.324	.186	.217	.070	.063
	News Source Use	-0.048	0.172	-0.015	-0.281	.779	.035	-.015	-.013
	Academic Source Use	0.285	0.165	0.090	1.732	.084	.111	.091	.082

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Direct Source Use	-0.221	0.162	-0.070	-1.368	.172	.004	-.072	-.065
Online Source Use	0.051	0.191	0.015	0.265	.791	-.008	.014	.013
Social Media Use	-0.015	0.166	-0.005	-0.088	.930	-.053	-.005	-.004
Academic Latent Class Membership	-0.420	0.362	-0.056	-1.161	.247	-.064	-.061	-.055
Competency X Intellectual Humility Interaction	8.015E-07	6.19E-06	0.007	0.129	.897	.034	.007	.006
Information Engagement X Intellectual Humility Interaction	0.001	0.006	0.011	0.205	.838	.025	.011	.010
Information Apprehension X Intellectual Humility	-0.013	0.026	-0.027	-0.526	.599	-.091	-.028	-.025
News Use X Intellectual Humility Interaction	-0.008	0.019	-0.040	-0.434	.665	.154	-.023	-.021
Academic Use X Intellectual Humility Interaction	-0.006	0.018	-0.030	-0.316	.752	.188	-.017	-.015
Direct Use X Intellectual Humility Interaction	0.008	0.019	0.053	0.413	.680	.216	.022	.020
Online Use X Intellectual Humility Interaction	0.003	0.020	0.017	0.126	.900	.199	.007	.006
Social Media X Intellectual Humility Interaction	-0.006	0.017	-0.042	-0.344	.731	.180	-.018	-.016
Academic LC Membership X Intellectual Humility Interaction	-0.045	0.042	-0.169	-1.066	.287	.188	-.056	-.050

Note. * $p < .05$; ** $p < .001$

Table 24. Hierarchical Multiple Regression Analysis Examining Intellectual Humility Moderation Effects on Perceived Sense of School Membership

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(1, 372) = 95.83$, $p < .001$, $\Delta R^2 = .21$								
	(Constant)	3.515	0.027		129.744	<.001**			
	Self-Esteem	-0.051	0.005	-0.453	-9.789	<.001**	-.453	-.453	-.453
2	$\Delta F(11, 362) = 6.15$, $p < .001$, $\Delta R^2 = .12$								
	(Constant)	3.560	0.122		29.188	<.001**			
	Self-Esteem	-0.047	0.005	-0.414	-8.982	<.001**	-.453	-.427	-.389
	Information Competency	2.24E-05	7.76E-06	0.139	2.891	.004*	.296	.150	.125
	Academic Information Engagement	0.022	0.007	0.137	2.915	.004*	.249	.151	.126
	Academic Information Apprehension	0.010	0.033	0.014	0.287	.774	-.187	.015	.012
	Intellectual Humility	0.012	0.003	0.182	3.680	<.001**	.298	.190	.159
	News Source Use	-0.011	0.023	-0.021	-0.464	.643	.016	-.024	-.020
	Academic Source Use	0.001	0.023	0.003	0.063	.950	.054	.003	.003
	Direct Source Use	-0.015	0.023	-0.030	-0.644	.520	.092	-.034	-.028
	Online Source Use	0.018	0.026	0.034	0.704	.482	.053	.037	.031
	Social Media Use	0.024	0.023	0.052	1.052	.293	.048	.055	.046
	Academic Latent Class Membership	-0.070	0.051	-0.060	-1.366	.173	-.075	-.072	-.059
3	$\Delta F(20, 353) = 2.56$, $p = .007$, $\Delta R^2 = .04$								
	(Constant)	3.563	0.123		28.903	<.001**			
	Self-Esteem	-0.049	0.005	-0.437	-9.505	<.001**	-.453	-.451	-.404
	Information Competency	2.45E-05	07.76E-06	0.152	3.158	.002*	.296	.166	.134
	Academic Information Engagement	0.018	0.008	0.111	2.338	.020*	.249	.123	.099
	Academic Information Apprehension	0.007	0.033	0.011	0.223	.823	-.187	.012	.009
	Intellectual Humility	0.038	0.014	0.591	2.654	.008*	.298	.140	.113
	News Source Use	-0.013	0.024	-0.026	-0.545	.586	.016	-.029	-.023
	Academic Source Use	0.010	0.023	0.020	0.428	.669	.054	.023	.018
	Direct Source Use	-0.017	0.023	-0.034	-0.735	.463	.092	-.039	-.031
	Online Source Use	0.026	0.027	0.049	0.984	.326	.053	.052	.042
	Social Media Use	0.023	0.023	0.050	0.993	.321	.048	.053	.042

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Academic Latent Class Membership	-0.069	0.051	-0.059	-1.353	.177	-.075	-.072	-.058
Competency X Intellectual Humility Interaction	-2.30E-06	8.26E-07	-0.135	-2.786	.006*	-.080	-.147	-.118
Information Engagement X Intellectual Humility Interaction	-0.001	0.001	-0.049	-1.058	.291	-.072	-.056	-.045
Information Apprehension X Intellectual Humility	-0.002	0.004	-0.024	-0.513	.608	-.085	-.027	-.022
News Use X Intellectual Humility Interaction	0.001	0.003	0.029	0.367	.714	.211	.020	.016
Academic Use X Intellectual Humility Interaction	-0.002	0.002	-0.058	-0.667	.505	.221	-.035	-.028
Direct Use X Intellectual Humility Interaction	0.003	0.003	0.125	1.079	.281	.296	.057	.046
Online Use X Intellectual Humility Interaction	-0.003	0.003	-0.112	-0.896	.371	.263	-.048	-.038
Social Media X Intellectual Humility Interaction	-4.63E-04	0.002	-0.021	-0.191	.848	.270	-.010	-.008
Academic LC Membership X Intellectual Humility Interaction	-0.016	0.006	-0.400	-2.796	.005*	.252	-.147	-.119

Note. * $p < .05$; ** $p < .001$

Table 25. Hierarchical Multiple Regression Analysis Examining Intellectual Humility Moderation Effects on Physical Quality of Life

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(1, 397) = 3.93$, $p = .048$, $\Delta R^2 = .01$								
	(Constant)	179250.943	2951.141		60.740	<.001**			
	Social Desirability	-2175.163	1097.735	-0.099	-1.982	.048*	-.099	-.099	-.099
2	$\Delta F(11, 387) = 3.60$, $p < .001$, $\Delta R^2 = .08$								
	(Constant)	166412.400	13617.306		12.221	<.001**			
	Social Desirability	-2647.945	1143.969	-0.120	-2.315	.021*	-.099	-.117	-.112
	Information Competency	0.874	0.891	0.052	0.982	.327	.130	.050	.047
	Health Information Engagement	1911.270	869.393	0.113	2.198	.029*	.165	.111	.106
	Health Information Apprehension	1700.582	3761.502	0.024	0.452	.651	-.005	.023	.022
	Intellectual Humility	1264.186	359.639	0.192	3.515	<.001**	.213	.176	.170
	News Source Use	-3747.831	2703.754	-0.071	-1.386	.166	-.065	-.070	-.067
	Academic Source Use	-1207.483	2636.473	-0.024	-0.458	.647	.011	-.023	-.022
	Direct Source Use	636.069	2601.194	0.013	0.245	.807	.073	.012	.012
	Online Source Use	3948.440	2845.017	0.074	1.388	.166	.101	.070	.067
	Social Media Use	-676.658	2532.480	-0.014	-0.267	.789	.013	-.014	-.013
	Health Latent Class Membership	9147.696	7298.655	0.061	1.253	.211	.056	.064	.061
3	$\Delta F(20, 378) = 0.60$, $p = .80$, $\Delta R^2 = .01$								
	(Constant)	164864.929	13926.270		11.838	<.001**			
	Social Desirability	-2654.831	1157.161	-0.121	-2.294	.022*	-.099	-.117	-.112
	Information Competency	0.964	0.906	0.057	1.064	.288	.130	.055	.052
	Health Information Engagement	1860.450	883.868	0.110	2.105	.036*	.165	.108	.102
	Health Information Apprehension	1481.673	3807.411	0.021	0.389	.697	-.005	.020	.019
	Intellectual Humility	766.427	1696.402	0.116	0.452	.652	.213	.023	.022
	News Source Use	-3489.935	2774.345	-0.066	-1.258	.209	-.065	-.065	-.061
	Academic Source Use	-1270.963	2679.174	-0.025	-0.474	.635	.011	-.024	-.023
	Direct Source Use	688.414	2635.380	0.014	0.261	.794	.073	.013	.013
	Online Source Use	4092.948	2945.837	0.077	1.389	.166	.101	.071	.068
	Social Media Use	-228.484	2652.029	-0.005	-0.086	.931	.013	-.004	-.004

Note: * p < .05; ** p < .001

	Unstandardized Coefficients		Standardized Coefficients			Correlations		
Model	*B*	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Health Latent Class Membership	8069.443	7423.862	0.054	1.087	.278	.056	.056	.053
Competency X Intellectual Humility Interaction	-0.064	0.101	-0.035	-0.640	.523	-.019	-.033	-.031
Information Engagement X Intellectual Humility Interaction	102.062	93.263	0.056	1.094	.274	.052	.056	.053
Information Apprehension X Intellectual Humility	205.328	395.857	0.026	0.519	.604	.019	.027	.025
News Use X Intellectual Humility Interaction	255.456	306.630	0.078	0.833	.405	.193	.043	.040
Academic Use X Intellectual Humility Interaction	122.419	283.871	0.042	0.431	.667	.201	.022	.021
Direct Use X Intellectual Humility Interaction	29.959	308.883	0.013	0.097	.923	.202	.005	.005
Online Use X Intellectual Humility Interaction	370.309	320.715	0.158	1.155	.249	.225	.059	.056
Social Media X Intellectual Humility Interaction	-297.054	285.864	-0.131	-1.039	.299	.181	-.053	-.051
Health LC Membership X Intellectual Humility Interaction	-345.160	818.088	-0.067	-0.422	.673	.196	-.022	-.021

Note. * $p < .05$; ** $p < .001$

Table 26. Hierarchical Multiple Regression Analysis Examining Intellectual Humility Moderation Effects on Mental Quality of Life

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(4, 382) = 54.34$, $p < .001$, $\Delta R^2 = .036$								
	(Constant)	37.522	0.559		67.134	<.001**			
	Self-Esteem	-1.185	0.104	-0.489	-11.378	<.001**	-.552	-.503	-.465
	Social Desirability	0.895	0.200	0.193	4.480	<.001**	.354	.223	.183
	Age	-0.866	0.310	-0.115	-2.796	.005*	-.091	-.142	-.114
	Sex at Birth	3.546	1.359	0.108	2.609	.009*	.124	.132	.107
2	$\Delta F(14, 372) = 1.45$, $p = .16$, $\Delta R^2 = .02$								
	(Constant)	41.493	2.431		17.066	<.001**			
	Self-Esteem	-1.196	0.109	-0.494	-10.979	<.001**	-.552	-.495	-.446
	Social Desirability	0.869	0.211	0.188	4.126	<.001**	.354	.209	.168
	Age	-0.921	0.317	-0.123	-2.906	.004*	-.091	-.149	-.118
	Sex at Birth	3.751	1.389	0.114	2.701	.007*	.124	.139	.110
	Information Competency	5.81E-06	1.58E-04	0.002	0.037	.971	.053	.002	.001
	Health Information Engagement	-0.225	0.156	-0.063	-1.445	.149	-.016	-.075	-.059
	Health Information Apprehension	-0.749	0.676	-0.051	-1.109	.268	-.222	-.057	-.045
	Intellectual Humility	-0.085	0.064	-0.062	-1.335	.183	.016	-.069	-.054
	News Source Use	-0.818	0.476	-0.074	-1.717	.087	-.042	-.089	-.070
	Academic Source Use	0.462	0.472	0.043	0.979	.328	-.045	.051	.040
	Direct Source Use	-0.189	0.469	-0.018	-0.404	.687	-.015	-.021	-.016
	Online Source Use	-0.837	0.516	-0.074	-1.622	.106	-.108	-.084	-.066
	Social Media Use	0.231	0.449	0.024	0.515	.607	-.035	.027	.021
	Health Latent Class Membership	-1.246	1.299	-0.039	-0.959	.338	-.050	-.050	-.039
3	$\Delta F(23, 363) = 0.50$, $p = .87$, $\Delta R^2 = .01$								
	(Constant)	42.212	2.492		16.937	<.001**			
	Self-Esteem	-1.220	0.111	-0.504	-10.952	<.001**	-.552	-.498	-.447
	Social Desirability	0.842	0.214	0.182	3.925	<.001**	.354	.202	.160
	Age	-0.932	0.322	-0.124	-2.895	.004*	-.091	-.150	-.118
	Sex at Birth	3.599	1.407	0.110	2.559	.011*	.124	.133	.105

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Information Competency	-7.51E-06	1.61E-04	-0.002	-0.047	.963	.053	-.002	-.002
Health Information Engagement	-0.191	0.159	-0.054	-1.200	.231	-.016	-.063	-.049
Health Information Apprehension	-0.810	0.686	-0.055	-1.182	.238	-.222	-.062	-.048
Intellectual Humility	-0.146	0.300	-0.106	-0.486	.627	.016	-.026	-.020
News Source Use	-0.845	0.490	-0.077	-1.726	.085	-.042	-.090	-.071
Academic Source Use	0.531	0.481	0.050	1.104	.270	-.045	.058	.045
Direct Source Use	-0.163	0.476	-0.015	-0.342	.733	-.015	-.018	-.014
Online Source Use	-0.981	0.536	-0.087	-1.830	.068	-.108	-.096	-.075
Social Media Use	0.180	0.473	0.018	0.380	.704	-.035	.020	.016
Health Latent Class Membership	-1.223	1.320	-0.039	-0.927	.355	-.050	-.049	-.038
Competency X Intellectual Humility Interaction	1.14E-05	1.78E-05	0.030	0.639	.523	.046	.034	.026
Information Engagement X Intellectual Humility Interaction	-0.024	0.017	-0.062	-1.439	.151	.003	-.075	-.059
Information Apprehension X Intellectual Humility	0.057	0.069	0.035	0.817	.414	.024	.043	.033
News Use X Intellectual Humility Interaction	-0.007	0.054	-0.010	-0.126	.900	.007	-.007	-.005
Academic Use X Intellectual Humility Interaction	2.537E-05	0.050	4.10E-05	0.001	.999	.026	.000	.000
Direct Use X Intellectual Humility Interaction	-0.053	0.055	-0.108	-0.975	.330	.017	-.051	-.040
Online Use X Intellectual Humility Interaction	0.001	0.057	0.001	0.010	.992	.006	.001	.000
Social Media X Intellectual Humility Interaction	0.030	0.051	0.062	0.586	.558	.008	.031	.024
Health LC Membership X Intellectual Humility Interaction	0.104	0.146	0.095	0.712	.477	.029	.037	.029

Note. * $p < .05$; ** $p < .001$

Table 27. Hierarchical Multiple Regression Analysis Examining Intellectual Humility Moderation Effects on Physical Symptoms

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	*ΔF(3, 356) = 27.51, p < .001, ΔR² = .03*								
	(Constant)	3.833	0.261		14.658	<.001**			
	Self-Esteem	0.119	0.017	0.340	7.066	<.001**	.365	.351	.337
	Sex at Birth	-0.978	0.233	-0.201	-4.200	<.001**	-.206	-.217	-.201
	Difficulty Paying Bills	0.316	0.112	0.136	2.817	.005*	.166	.148	.135
2	ΔF(13, 346) = 1.30, *p* = .23, ΔR^2 = .03								
	(Constant)	3.246	0.476		6.817	<.001**			
	Self-Esteem	0.119	0.018	0.340	6.605	<.001**	.365	.335	.314
	Sex at Birth	-0.953	0.237	-0.196	-4.013	<.001**	-.206	-.211	-.191
	Difficulty Paying Bills	0.304	0.113	0.131	2.691	.007*	.166	.143	.128
	Information Competency	2.95E-05	2.67E-05	0.059	1.106	.270	-.051	.059	.053
	Health Information Engagement	-0.003	0.027	-0.006	-0.112	.911	-.055	-.006	-.005
	Health Information Apprehension	0.067	0.112	0.031	0.596	.551	.161	.032	.028
	Intellectual Humility	-0.014	0.011	-0.072	-1.342	.181	-.116	-.072	-.064
	News Source Use	0.178	0.082	0.110	2.176	.030*	.104	.116	.103
	Academic Source Use	0.032	0.080	0.021	0.404	.686	.064	.022	.019
	Direct Source Use	-0.014	0.081	-0.009	-0.169	.866	.003	-.009	-.008
	Online Source Use	0.009	0.088	0.006	0.106	.916	.044	.006	.005
	Social Media Use	0.111	0.077	0.078	1.454	.147	.100	.078	.069
	Health Latent Class Membership	-0.019	0.219	-0.004	-0.087	.931	.001	-.005	-.004
3	ΔF(22, 337) = 1.24, *p* = .27, ΔR^2 = .03								
	(Constant)	3.126	0.483		6.476	<.001**			
	Self-Esteem	0.122	0.018	0.347	6.655	<.001**	.365	.341	.316
	Sex at Birth	-0.913	0.239	-0.188	-3.820	<.001**	-.206	-.204	-.181
	Difficulty Paying Bills	0.325	0.113	0.140	2.866	.004*	.166	.154	.136
	Information Competency	2.58E-05	2.70E-05	0.052	0.957	.339	-.051	.052	.045
	Health Information Engagement	-0.006	0.027	-0.011	-0.215	.830	-.055	-.012	-.010
	Health Information Apprehension	0.085	0.113	0.039	0.756	.450	.161	.041	.036

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Intellectual Humility	0.037	0.050	0.188	0.751	.453	-.116	.041	.036
News Source Use	0.193	0.084	0.119	2.292	.023*	.104	.124	.109
Academic Source Use	0.009	0.082	0.005	0.105	.917	.064	.006	.005
Direct Source Use	-0.017	0.082	-0.011	-0.209	.835	.003	-.011	-.010
Online Source Use	0.009	0.091	0.005	0.099	.921	.044	.005	.005
Social Media Use	0.130	0.080	0.091	1.618	.107	.100	.088	.077
Health Latent Class Membership	-0.038	0.221	-0.008	-0.171	.864	.001	-.009	-.008
Competency X Intellectual Humility Interaction	-8.37E-07	2.95E-06	-0.016	-0.283	.777	-.030	-.015	-.013
Information Engagement X Intellectual Humility Interaction	0.003	0.003	0.051	1.021	.308	.003	.056	.048
Information Apprehension X Intellectual Humility	-0.025	0.012	-0.104	-2.055	.041*	-.086	-.111	-.097
News Use X Intellectual Humility Interaction	-0.013	0.009	-0.126	-1.440	.151	-.131	-.078	-.068
Academic Use X Intellectual Humility Interaction	-0.009	0.009	-0.102	-1.064	.288	-.147	-.058	-.050
Direct Use X Intellectual Humility Interaction	0.006	0.009	0.087	0.675	.500	-.111	.037	.032
Online Use X Intellectual Humility Interaction	0.001	0.010	0.009	0.067	.947	-.108	.004	.003
Social Media X Intellectual Humility Interaction	-0.004	0.008	-0.052	-0.418	.676	-.087	-.023	-.020
Health LC Membership X Intellectual Humility Interaction	-0.017	0.024	-0.112	-0.722	.471	-.130	-.039	-.034

Note. * $p < .05$; ** $p < .001$

Table 28. Hierarchical Multiple Regression Analysis Examining Latent Class Membership Moderation Effects on Semester GPA

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(5, 370) = 9.92$, $p < .001$, $\Delta R^2 = .12$								
	(Constant)	27.870	3.119		8.936	<.001**			
	Social Desirability	-0.584	0.348	-0.083	-1.679	.094	-.085	-.087	-.082
	Age	-4.040	0.773	-0.360	-5.229	<.001**	-.223	-.262	-.255
	Sex at Birth	6.023	2.498	0.120	2.412	.016*	.073	.124	.118
	Family Income	0.977	0.280	0.171	3.490	.001*	.192	.179	.170
	Student Classification	3.265	1.235	0.181	2.644	.009*	-.059	.136	.129
2	$\Delta F(15, 360) = 4.23$, $p < .001$, $\Delta R^2 = .09$								
	(Constant)	21.824	5.298		4.120	<.001**			
	Social Desirability	-0.690	0.354	-0.098	-1.950	.052	-.085	-.102	-.091
	Age	-3.919	0.757	-0.349	-5.177	<.001**	-.223	-.263	-.242
	Sex at Birth	5.220	2.473	0.104	2.111	.035*	.073	.111	.099
	Family Income	0.938	0.273	0.165	3.443	.001*	.192	.179	.161
	Student Classification	2.639	1.208	0.146	2.185	.030*	-.059	.114	.102
	Information Competency	0.001	2.80E-04	0.100	1.924	.055	.151	.101	.090
	Academic Information Engagement	0.547	0.266	0.106	2.055	.041*	.090	.108	.096
	Academic Information Apprehension	-1.134	1.183	-0.049	-0.959	.338	-.047	-.050	-.045
	Intellectual Humility	-0.134	0.111	-0.064	-1.207	.228	.027	-.063	-.057
	News Source Use	-0.869	0.859	-0.050	-1.011	.312	.000	-.053	-.047
	Academic Source Use	3.113	0.825	0.192	3.771	<.001**	.172	.195	.177
	Direct Source Use	-1.662	0.828	-0.103	-2.007	.046*	-.061	-.105	-.094
	Online Source Use	2.823	0.932	0.163	3.030	.003*	.163	.158	.142
	Social Media Use	-0.982	0.817	-0.064	-1.203	.230	-.033	-.063	-.056
	Academic Latent Class Membership	1.784	1.818	0.047	0.981	.327	.023	.052	.046
3	$\Delta F(24, 351) = 2.02$, $p = .04$, $\Delta R^2 = .04$								
	(Constant)	-4.647	11.046		-0.421	.674			
	Social Desirability	-0.773	0.356	-0.110	-2.172	.031*	-.085	-.115	-.100
	Age	-3.599	0.762	-0.321	-4.725	<.001**	-.223	-.245	-.218

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Sex at Birth	5.539	2.463	0.110	2.249	.025*	.073	.119	.104
Family Income	1.042	0.273	0.183	3.818	<.001**	.192	.200	.177
Student Classification	2.088	1.211	0.116	1.724	.086	-.059	.092	.080
Information Competency	-0.001	0.001	-0.225	-1.421	.156	.151	-.076	-.066
Academic Information Engagement	0.453	0.829	0.088	0.546	.585	.090	.029	.025
Academic Information Apprehension	-6.904	3.616	-0.299	-1.910	.057	-.047	-.101	-.088
Intellectual Humility	-0.358	0.351	-0.171	-1.019	.309	.027	-.054	-.047
News Source Use	5.096	2.677	0.295	1.904	.058	.000	.101	.088
Academic Source Use	4.476	2.551	0.275	1.754	.080	.172	.093	.081
Direct Source Use	-2.786	2.504	-0.173	-1.113	.267	-.061	-.059	-.051
Online Source Use	6.411	2.784	0.369	2.303	.022*	.163	.122	.106
Social Media Use	1.722	2.552	0.113	0.675	.500	-.033	.036	.031
Academic Latent Class Membership	19.438	6.732	0.508	2.887	.004*	.023	.152	.133
Competency X Latent Class Interaction	0.001	0.001	0.343	2.177	.030*	.166	.115	.101
Information Engagement X Latent Class Interaction	0.055	0.525	0.017	0.105	.917	.093	.006	.005
Information Apprehension X Latent Class Interaction	3.791	2.294	0.258	1.653	.099	-.020	.088	.076
News Use X Latent Class Interaction	-4.168	1.725	-0.425	-2.415	.016*	-.015	-.128	-.112
Academic Use X Latent Class Interaction	-0.744	1.638	-0.080	-0.454	.650	.145	-.024	-.021
Direct Use X Latent Class Interaction	0.797	1.643	0.093	0.485	.628	-.038	.026	.022
Online Use X Latent Class Interaction	-2.543	1.845	-0.289	-1.378	.169	.115	-.073	-.064
Social Use X Latent Class Interaction	-1.661	1.652	-0.204	-1.005	.315	-.029	-.054	-.046
Intellectual Humility X Latent Class Interaction	0.174	0.222	0.130	0.784	.433	.042	.042	.036

Note. * p < .05; ** p < .001

Table 29. Hierarchical Multiple Regression Analysis Examining Latent Class Membership Moderation Effects on Behavioral Engagement

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(2, 369) = 17.12$, $p < .001$, $\Delta R^2 = .09$								
	(Constant)	8048.083	369.957		21.754	<.001**			
	Self-Esteem	-156.460	29.612	-0.263	-5.284	<.001**	-.265	-.265	-.263
	Family Income	111.012	46.051	0.120	2.411	.016*	.125	.125	.120
2	$\Delta F(12, 359) = 5.34$, $p < .001$, $\Delta R^2 = .12$								
	(Constant)	7602.920	800.903		9.493	<.001**			
	Self-Esteem	-143.504	29.830	-0.241	-4.811	<.001**	-.265	-.246	-.227
	Family Income	95.759	44.423	0.104	2.156	.032*	.125	.113	.102
	Information Competency	0.205	0.045	0.240	4.580	<.001**	.321	.235	.216
	Academic Information Engagement	79.103	42.801	0.095	1.848	.065	.199	.097	.087
	Academic Information Apprehension	298.544	191.795	0.080	1.557	.120	-.056	.082	.073
	Intellectual Humility	22.065	18.008	0.066	1.225	.221	.172	.065	.058
	News Source Use	-107.628	137.650	-0.039	-0.782	.435	.028	-.041	-.037
	Academic Source Use	329.123	134.845	0.124	2.441	.015*	.150	.128	.115
	Direct Source Use	-56.450	133.493	-0.022	-0.423	.673	.066	-.022	-.020
	Online Source Use	-220.516	149.988	-0.078	-1.470	.142	-.056	-.077	-.069
	Social Media Use	95.245	133.772	0.038	0.712	.477	-.016	.038	.034
	Academic Latent Class Membership	426.281	296.122	0.069	1.440	.151	.055	.076	.068
3	$\Delta F(21, 350) = 1.36$, $p = .20$, $\Delta R^2 = .03$								
	(Constant)	3857.323	1777.660		2.170	.031			
	Self-Esteem	-138.284	30.235	-0.233	-4.574	<.001**	-.265	-.237	-.214
	Family Income	109.875	44.738	0.119	2.456	.015*	.125	.130	.115
	Information Competency	0.034	0.138	0.040	0.248	.804	.321	.013	.012
	Academic Information Engagement	21.642	136.872	0.026	0.158	.874	.199	.008	.007
	Academic Information Apprehension	339.369	589.134	0.091	0.576	.565	-.056	.031	.027
	Intellectual Humility	59.126	57.451	0.176	1.029	.304	.172	.055	.048
	News Source Use	532.721	434.263	0.192	1.227	.221	.028	.065	.058
	Academic Source Use	385.516	425.136	0.145	0.907	.365	.150	.048	.043

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Direct Source Use	-169.007	406.679	-0.065	-0.416	.678	.066	-.022	-.019
Online Source Use	-213.603	462.610	-0.076	-0.462	.645	-.056	-.025	-.022
Social Media Use	1107.520	418.726	0.447	2.645	.009*	-.016	.140	.124
Academic Latent Class Membership	2811.917	1088.531	0.454	2.583	.010*	.055	.137	.121
Competency X Latent Class Interaction	0.117	0.089	0.210	1.307	.192	.322	.070	.061
Information Engagement X Latent Class Interaction	37.409	85.733	0.070	0.436	.663	.191	.023	.020
Information Apprehension X Latent Class Interaction	-42.731	368.438	-0.018	-0.116	.908	-.063	-.006	-.005
News Use X Latent Class Interaction	-444.494	278.672	-0.278	-1.595	.112	.039	-.085	-.075
Academic Use X Latent Class Interaction	-29.274	271.388	-0.019	-0.108	.914	.153	-.006	-.005
Direct Use X Latent Class Interaction	77.660	268.097	0.057	0.290	.772	.073	.015	.014
Online Use X Latent Class Interaction	9.594	307.326	0.007	0.031	.975	-.009	.002	.001
Social Use X Latent Class Interaction	-674.730	271.894	-0.511	-2.482	.014*	-.021	-.131	-.116
Intellectual Humility X Latent Class Interaction	-22.593	36.318	-0.104	-0.622	.534	.168	-.033	-.029

Note. * $p < .05$; ** $p < .001$

Table 30. Hierarchical Multiple Regression Analysis Examining Latent Class Membership Moderation Effects on Cognitive Engagement

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(2, 376) = 10.12$, $p < .001$, $\Delta R^2 = .05$								
	(Constant)	17.365	0.407		42.638	<.001**			
	Self-Esteem	-0.134	0.032	-0.207	-4.120	<.001**	-.208	-.208	-.207
	Family Income	0.097	0.051	0.096	1.911	.057	.099	.098	.096
2	$\Delta F(12, 366) = 8.73$, $p < .001$, $\Delta R^2 = .18$								
	(Constant)	15.543	0.853		18.213	<.001**			
	Self-Esteem	-0.104	0.032	-0.160	-3.273	.001*	-.208	-.169	-.150
	Family Income	0.104	0.047	0.103	2.211	.028*	.099	.115	.101
	Information Competency	1.51E-04	4.80E-05	0.161	3.142	.002*	.315	.162	.144
	Academic Information Engagement	0.143	0.046	0.155	3.120	.002*	.280	.161	.143
	Academic Information Apprehension	0.057	0.204	0.014	0.281	.779	-.103	.015	.013
	Intellectual Humility	0.041	0.019	0.110	2.103	.036*	.257	.109	.096
	News Source Use	0.150	0.147	0.049	1.021	.308	.127	.053	.047
	Academic Source Use	0.530	0.143	0.184	3.710	<.001**	.271	.190	.170
	Direct Source Use	0.179	0.143	0.063	1.257	.210	.166	.066	.057
	Online Source Use	0.146	0.163	0.046	0.897	.370	.080	.047	.041
	Social Media Use	-0.034	0.143	-0.013	-0.240	.810	-.010	-.013	-.011
	Academic Latent Class Membership	-0.103	0.315	-0.015	-0.326	.745	-.014	-.017	-.015
3	$\Delta F(21, 357) = 2.19$, $p = .02$, $\Delta R^2 = .04$								
	(Constant)	12.165	1.885		6.452	<.001**			
	Self-Esteem	-0.105	0.032	-0.162	-3.291	.001*	-.208	-.172	-.148
	Family Income	0.106	0.047	0.104	2.242	.026*	.099	.118	.101
	Information Competency	-4.35E-05	1.46E-04	-0.046	-0.298	.766	.315	-.016	-.013
	Academic Information Engagement	0.245	0.145	0.267	1.691	.092	.280	.089	.076
	Academic Information Apprehension	-0.081	0.615	-0.020	-0.132	.895	-.103	-.007	-.006
	Intellectual Humility	0.104	0.061	0.280	1.685	.093	.257	.089	.076
	News Source Use	-0.151	0.460	-0.050	-0.329	.742	.127	-.017	-.015
	Academic Source Use	0.959	0.447	0.333	2.147	.032*	.271	.113	.097
	Note: * p < .05; ** p < .001								
	Direct Source Use	1.367	0.431	0.480	3.173	.002*	.166	.166	.143

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Online Source Use	-0.510	0.493	-0.162	-1.034	.302	.080	-.055	-.047
Social Media Use	0.620	0.444	0.229	1.396	.163	-.010	.074	.063
Academic Latent Class Membership	2.168	1.154	0.320	1.879	.061	-.014	.099	.085
Competency X Latent Class Interaction	1.28E-04	9.44E-05	0.210	1.355	.176	.304	.072	.061
Information Engagement X Latent Class Interaction	-0.069	0.091	-0.117	-0.758	.449	.243	-.040	-.034
Information Apprehension X Latent Class Interaction	0.057	0.386	0.022	0.147	.883	-.096	.008	.007
News Use X Latent Class Interaction	0.215	0.294	0.124	0.732	.464	.119	.039	.033
Academic Use X Latent Class Interaction	-0.309	0.285	-0.191	-1.086	.278	.214	-.057	-.049
Direct Use X Latent Class Interaction	-0.842	0.283	-0.562	-2.973	.003*	.075	-.155	-.134
Online Use X Latent Class Interaction	0.492	0.330	0.317	1.491	.137	.057	.079	.067
Social Use X Latent Class Interaction	-0.446	0.288	-0.311	-1.549	.122	-.041	-.082	-.070
Intellectual Humility X Latent Class Interaction	-0.045	0.039	-0.192	-1.168	.243	.225	-.062	-.053

Note. * $p < .05$; ** $p < .001$

Table 31. Hierarchical Multiple Regression Analysis Examining Latent Class Membership Moderation Effects on Emotional Engagement

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(2, 380) = 27.89$, $p < .001$, $\Delta R^2 = .13$								
	(Constant)	16.361	0.179		91.441	<.001**			
	Self-Esteem	-0.199	0.037	-0.273	-5.416	<.001**	-.323	-.268	-.259
	Social Desirability	0.224	0.070	0.162	3.210	.001*	.246	.163	.154
2	$\Delta F(12, 370) = 2.74$, $p = .003$, $\Delta R^2 = .06$								
	(Constant)	17.172	0.833		20.603	<.001**			
	Self-Esteem	-0.201	0.038	-0.276	-5.333	<.001**	-.323	-.267	-.250
	Social Desirability	0.179	0.071	0.129	2.510	.013*	.246	.129	.118
	Information Competency	9.29E-05	5.53E-05	0.088	1.681	.094	.196	.087	.079
	Academic Information Engagement	0.072	0.052	0.071	1.390	.165	.179	.072	.065
	Academic Information Apprehension	0.170	0.231	0.038	0.734	.463	-.132	.038	.034
	Intellectual Humility	0.054	0.022	0.131	2.453	.015*	.217	.126	.115
	News Source Use	-0.077	0.164	-0.023	-0.468	.640	.035	-.024	-.022
	Academic Source Use	0.299	0.160	0.094	1.861	.064	.111	.096	.087
	Direct Source Use	-0.196	0.158	-0.062	-1.236	.217	.004	-.064	-.058
	Online Source Use	0.037	0.179	0.011	0.205	.838	-.008	.011	.010
	Social Media Use	-0.048	0.157	-0.016	-0.307	.759	-.053	-.016	-.014
	Academic Latent Class Membership	-0.460	0.354	-0.062	-1.301	.194	-.064	-.067	-.061
3	$\Delta F(21, 361) = 2.33$, $p = .02$, $\Delta R^2 = .05$								
	(Constant)	14.527	2.006		7.241	<.001**			
	Self-Esteem	-0.203	0.038	-0.278	-5.382	<.001**	-.323	-.273	-.248
	Social Desirability	0.206	0.071	0.149	2.895	.004*	.246	.151	.133
	Information Competency	2.68E-04	1.68E-04	0.253	1.589	.113	.196	.083	.073
	Academic Information Engagement	0.073	0.163	0.072	0.448	.654	.179	.024	.021
	Academic Information Apprehension	0.630	0.699	0.142	0.901	.368	-.132	.047	.042
	Intellectual Humility	0.076	0.070	0.185	1.093	.275	.217	.057	.050
	News Source Use	-0.973	0.519	-0.293	-1.875	.062	.035	-.098	-.086
	Academic Source Use	1.587	0.503	0.498	3.155	.002*	.111	.164	.145

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Direct Source Use	0.898	0.485	0.285	1.854	.065	.004	.097	.085
Online Source Use	-0.254	0.548	-0.075	-0.464	.643	-.008	-.024	-.021
Social Media Use	-0.144	0.484	-0.049	-0.297	.767	-.053	-.016	-.014
Academic Latent Class Membership	1.354	1.275	0.181	1.062	.289	-.064	.056	.049
Competency X Latent Class Interaction	-1.25E-04	1.09E-04	-0.182	-1.142	.254	.163	-.060	-.053
Information Engagement X Latent Class Interaction	-0.004	0.102	-0.006	-0.038	.970	.150	-.002	-.002
Information Apprehension X Latent Class Interaction	-0.301	0.436	-0.108	-0.691	.490	-.128	-.036	-.032
News Use X Latent Class Interaction	0.658	0.328	0.352	2.004	.046*	.023	.105	.092
Academic Use X Latent Class Interaction	-0.897	0.319	-0.503	-2.811	.005*	.036	-.146	-.130
Direct Use X Latent Class Interaction	-0.786	0.316	-0.471	-2.491	.013*	-.069	-.130	-.115
Online Use X Latent Class Interaction	0.238	0.360	0.140	0.662	.508	-.041	.035	.031
Social Use X Latent Class Interaction	0.048	0.314	0.031	0.153	.879	-.087	.008	.007
Intellectual Humility X Latent Class Interaction	-0.018	0.044	-0.068	-0.408	.684	.188	-.021	-.019

Note. * $p < .05$; ** $p < .001$

Table 32. Hierarchical Multiple Regression Analysis Examining Latent Class Membership Moderation Effects on Perceived Sense of School Membership

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(1, 372) = 95.83$, $p < .001$, $\Delta R^2 = .21$								
	(Constant)	3.515	0.027		129.744	<.001**			
	Self-Esteem	-0.051	0.005	-0.453	-9.789	<.001**	-.453	-.453	-.453
2	$\Delta F(11, 362) = 6.15$, $p < .001$, $\Delta R^2 = .12$								
	(Constant)	3.560	0.122		29.188	<.001**			
	Self-Esteem	-0.047	0.005	-0.414	-8.982	<.001**	-.453	-.427	-.389
	Information Competency	2.24E-05	7.76E-06	0.139	2.891	.004*	.296	.150	.125
	Academic Information Engagement	0.022	0.007	0.137	2.915	.004*	.249	.151	.126
	Academic Information Apprehension	0.010	0.033	0.014	0.287	.774	-.187	.015	.012
	Intellectual Humility	0.012	0.003	0.182	3.680	<.001**	.298	.190	.159
	News Source Use	-0.011	0.023	-0.021	-0.464	.643	.016	-.024	-.020
	Academic Source Use	0.001	0.023	0.003	0.063	.950	.054	.003	.003
	Direct Source Use	-0.015	0.023	-0.030	-0.644	.520	.092	-.034	-.028
	Online Source Use	0.018	0.026	0.034	0.704	.482	.053	.037	.031
	Social Media Use	0.024	0.023	0.052	1.052	.293	.048	.055	.046
	Academic Latent Class Membership	-0.070	0.051	-0.060	-1.366	.173	-.075	-.072	-.059
3	$\Delta F(20, 353) = 1.45$, $p = .16$, $\Delta R^2 = .02$								
	(Constant)	3.227	0.298		10.835	<.001**			
	Self-Esteem	-0.048	0.005	-0.430	-9.179	<.001**	-.453	-.439	-.396
	Information Competency	3.232E-05	2.42E-05	0.200	1.338	.182	.296	.071	.058
	Academic Information Engagement	0.002	0.024	0.012	0.077	.939	.249	.004	.003
	Academic Information Apprehension	-0.080	0.103	-0.115	-0.778	.437	-.187	-.041	-.034
	Intellectual Humility	0.033	0.010	0.519	3.237	.001*	.298	.170	.139
	News Source Use	-0.030	0.076	-0.059	-0.401	.689	.016	-.021	-.017
	Academic Source Use	0.068	0.075	0.137	0.909	.364	.054	.048	.039
	Direct Source Use	0.063	0.070	0.128	0.897	.370	.092	.048	.039
	Online Source Use	0.014	0.082	0.026	0.169	.866	.053	.009	.007

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Social Media Use	0.041	0.072	0.087	0.567	.571	.048	.030	.024
Academic Latent Class Membership	0.144	0.189	0.123	0.761	.447	-.075	.040	.033
Competency X Latent Class Interaction	-7.04E-06	1.55E-05	-0.068	-0.454	.650	.261	-.024	-.020
Information Engagement X Latent Class Interaction	0.012	0.015	0.117	0.780	.436	.224	.041	.034
Information Apprehension X Latent Class Interaction	0.057	0.064	0.132	0.897	.370	-.158	.048	.039
News Use X Latent Class Interaction	0.018	0.047	0.064	0.390	.697	-.009	.021	.017
Academic Use X Latent Class Interaction	-0.044	0.047	-0.160	-0.938	.349	.008	-.050	-.040
Direct Use X Latent Class Interaction	-0.058	0.046	-0.223	-1.258	.209	.007	-.067	-.054
Online Use X Latent Class Interaction	0.005	0.053	0.020	0.102	.919	.000	.005	.004
Social Use X Latent Class Interaction	-0.009	0.046	-0.037	-0.197	.844	-.011	-.011	-.009
Intellectual Humility X Latent Class Interaction	-0.014	0.006	-0.344	-2.172	.031*	.252	-.115	-.094

Note. * $p < .05$; ** $p < .001$

Table 33. Hierarchical Multiple Regression Analysis Examining Latent Class Membership Moderation Effects on Physical Quality of Life

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(1, 397) = 3.93$, $p = .048$, $\Delta R^2 = .01$								
	(Constant)	179250.943	2951.141		60.740	<.001**			
	Social Desirability	-2175.163	1097.735	-0.099	-1.982	.048*	-.099	-.099	-.099
2	$\Delta F(11, 387) = 3.60$, $p < .001$, $\Delta R^2 = .08$								
	(Constant)	166412.400	13617.306		12.221	<.001**			
	Social Desirability	-2647.945	1143.969	-0.120	-2.315	.021*	-.099	-.117	-.112
	Information Competency	0.874	0.891	0.052	0.982	.327	.130	.050	.047
	Health Information Engagement	1911.270	869.393	0.113	2.198	.029*	.165	.111	.106
	Health Information Apprehension	1700.582	3761.502	0.024	0.452	.651	-.005	.023	.022
	Intellectual Humility	1264.186	359.639	0.192	3.515	<.001**	.213	.176	.170
	News Source Use	-3747.831	2703.754	-0.071	-1.386	.166	-.065	-.070	-.067
	Academic Source Use	-1207.483	2636.473	-0.024	-0.458	.647	.011	-.023	-.022
	Direct Source Use	636.069	2601.194	0.013	0.245	.807	.073	.012	.012
	Online Source Use	3948.440	2845.017	0.074	1.388	.166	.101	.070	.067
	Social Media Use	-676.658	2532.480	-0.014	-0.267	.789	.013	-.014	-.013
	Health Latent Class Membership	9147.696	7298.655	0.061	1.253	.211	.056	.064	.061
3	$\Delta F(20, 378) = 0.64$, $p = .76$, $\Delta R^2 = .01$								
	(Constant)	186045.684	34173.368		5.444	<.001**			
	Social Desirability	-2768.885	1152.993	-0.126	-2.401	.017*	-.099	-.123	-.117
	Information Competency	4.570	2.895	0.272	1.578	.115	.130	.081	.077
	Health Information Engagement	2388.483	3066.228	0.142	0.779	.436	.165	.040	.038
	Health Information Apprehension	2723.362	11634.613	0.039	0.234	.815	-.005	.012	.011
	Intellectual Humility	890.533	1143.215	0.135	0.779	.436	.213	.040	.038
	News Source Use	-2119.293	8672.605	-0.040	-0.244	.807	-.065	-.013	-.012
	Academic Source Use	-9649.527	8845.985	-0.190	-1.091	.276	.011	-.056	-.053
	Direct Source Use	-90.741	8973.817	-0.002	-0.010	.992	.073	-.001	.000
	Online Source Use	14295.144	9262.070	0.268	1.543	.124	.101	.079	.075
	Social Media Use	-12252.945	8319.451	-0.262	-1.473	.142	.013	-.076	-.072

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Health Latent Class Membership	-6315.229	26921.711	-0.042	-0.235	.815	.056	-.012	-.011
Competency X Latent Class Interaction	-3.037	2.316	-0.232	-1.311	.191	.102	-.067	-.064
Information Engagement X Latent Class Interaction	-258.523	2594.385	-0.019	-0.100	.921	.147	-.005	-.005
Information Apprehension X Latent Class Interaction	-633.023	9205.212	-0.011	-0.069	.945	-.001	-.004	-.003
News Use X Latent Class Interaction	-1068.806	6850.639	-0.027	-0.156	.876	-.039	-.008	-.008
Academic Use X Latent Class Interaction	6837.317	7240.277	0.187	0.944	.346	.044	.049	.046
Direct Use X Latent Class Interaction	383.191	7486.958	0.012	0.051	.959	.091	.003	.002
Online Use X Latent Class Interaction	-8965.760	7454.002	-0.270	-1.203	.230	.104	-.062	-.058
Social Use X Latent Class Interaction	9793.137	6746.515	0.328	1.452	.147	.052	.074	.071
Intellectual Humility X Latent Class Interaction	354.984	903.539	0.068	0.393	.695	.196	.020	.019

Note. * $p < .05$; ** $p < .001$

Table 34. Hierarchical Multiple Regression Analysis Examining Latent Class Membership Moderation Effects on Mental Quality of Life

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(4, 382) = 54.34$, $p < .001$, $\Delta R^2 = .036$								
	(Constant)	37.522	0.559		67.134	<.001**			
	Self-Esteem	-1.185	0.104	-0.489	-11.378	<.001**	-.552	-.503	-.465
	Social Desirability	0.895	0.200	0.193	4.480	<.001**	.354	.223	.183
	Age	-0.866	0.310	-0.115	-2.796	.005*	-.091	-.142	-.114
	Sex at Birth	3.546	1.359	0.108	2.609	.009*	.124	.132	.107
2	$\Delta F(14, 372) = 1.45$, $p = .16$, $\Delta R^2 = .02$								
	(Constant)	41.493	2.431		17.066	<.001**			
	Self-Esteem	-1.196	0.109	-0.494	-10.979	<.001**	-.552	-.495	-.446
	Social Desirability	0.869	0.211	0.188	4.126	<.001**	.354	.209	.168
	Age	-0.921	0.317	-0.123	-2.906	.004*	-.091	-.149	-.118
	Sex at Birth	3.751	1.389	0.114	2.701	.007*	.124	.139	.110
	Information Competency	5.81E-06	1.51E-04	0.002	0.037	.971	.053	.002	.001
	Health Information Engagement	-0.225	0.156	-0.063	-1.445	.149	-.016	-.075	-.059
	Health Information Apprehension	-0.749	0.676	-0.051	-1.109	.268	-.222	-.057	-.045
	Intellectual Humility	-0.085	0.064	-0.062	-1.335	.183	.016	-.069	-.054
	News Source Use	-0.818	0.476	-0.074	-1.717	.087	-.042	-.089	-.070
	Academic Source Use	0.462	0.472	0.043	0.979	.328	-.045	.051	.040
	Direct Source Use	-0.189	0.469	-0.018	-0.404	.687	-.015	-.021	-.016
	Online Source Use	-0.837	0.516	-0.074	-1.622	.106	-.108	-.084	-.066
	Social Media Use	0.231	0.449	0.024	0.515	.607	-.035	.027	.021
	Health Latent Class Membership	-1.246	1.299	-0.039	-0.959	.338	-.050	-.050	-.039
3	$\Delta F(23, 363) = 0.50$, $p = .88$, $\Delta R^2 = .007$								
	(Constant)	40.373	6.126		6.590	.000			
	Self-Esteem	-1.188	0.113	-0.491	-10.551	<.001**	-.552	-.484	-.431
	Social Desirability	0.868	0.213	0.188	4.080	<.001**	.354	.209	.167
	Age	-0.931	0.321	-0.124	-2.905	.004*	-.091	-.151	-.119
	Sex at Birth	3.640	1.408	0.111	2.585	.010*	.124	.134	.106

Note: * p < .05; ** p < .001

Model	Unstandardized Coefficients		Standardized Coefficients			Correlations		
	B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Information Competency	-0.001	0.001	-0.168	-1.160	.247	.053	-.061	-.047
Health Information Engagement	-0.347	0.552	-0.098	-0.630	.529	-.016	-.033	-.026
Health Information Apprehension	-2.131	2.031	-0.145	-1.049	.295	-.222	-.055	-.043
Intellectual Humility	-0.197	0.206	-0.143	-0.958	.339	.016	-.050	-.039
News Source Use	-0.648	1.542	-0.059	-0.420	.675	-.042	-.022	-.017
Academic Source Use	1.068	1.596	0.100	0.669	.504	-.045	.035	.027
Direct Source Use	1.397	1.638	0.132	0.853	.394	-.015	.045	.035
Online Source Use	-1.162	1.694	-0.103	-0.686	.493	-.108	-.036	-.028
Social Media Use	-1.011	1.506	-0.103	-0.671	.502	-.035	-.035	-.027
Health Latent Class Membership	-0.312	4.839	-0.010	-0.064	.949	-.050	-.003	-.003
Competency X Latent Class Interaction	4.86E-04	4.06E-04	0.178	1.197	.232	.063	.063	.049
Information Engagement X Latent Class Interaction	0.098	0.469	0.033	0.208	.835	.010	.011	.009
Information Apprehension X Latent Class Interaction	1.104	1.613	0.094	0.685	.494	-.213	.036	.028
News Use X Latent Class Interaction	-0.225	1.217	-0.027	-0.185	.853	-.063	-.010	-.008
Academic Use X Latent Class Interaction	-0.453	1.311	-0.059	-0.346	.730	-.058	-.018	-.014
Direct Use X Latent Class Interaction	-1.353	1.371	-0.196	-0.986	.325	-.054	-.052	-.040
Online Use X Latent Class Interaction	0.264	1.376	0.038	0.192	.848	-.103	.010	.008
Social Use X Latent Class Interaction	1.089	1.238	0.174	0.880	.379	-.047	.046	.036
Intellectual Humility X Latent Class Interaction	0.094	0.164	0.086	0.571	.568	.029	.030	.023

Note. * $p < .05$; ** $p < .001$

Table 35. Hierarchical Multiple Regression Analysis Examining Latent Class Membership Moderation Effects on Physical Symptoms

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
1	$\Delta F(3, 356) = 27.51$, $p < .001$, $\Delta R^2 = .19$								
	(Constant)	3.833	0.261		14.658	<.001**			
	Self-Esteem	0.119	0.017	0.340	7.066	<.001**	.365	.351	.337
	Sex at Birth	-0.978	0.233	-0.201	-4.200	<.001**	-.206	-.217	-.201
	Difficulty Paying Bills	0.316	0.112	0.136	2.817	.005*	.166	.148	.135
2	$\Delta F(13, 346) = 1.30$, $p = .23$, $\Delta R^2 = .03$								
	(Constant)	3.246	0.476		6.817	<.001**			
	Self-Esteem	0.119	0.018	0.340	6.605	<.001**	.365	.335	.314
	Sex at Birth	-0.953	0.237	-0.196	-4.013	<.001**	-.206	-.211	-.191
	Difficulty Paying Bills	0.304	0.113	0.131	2.691	.007*	.166	.143	.128
	Information Competency	2.95E-05	2.67E-05	0.059	1.106	.270	-.051	.059	.053
	Health Information Engagement	-0.003	0.027	-0.006	-0.112	.911	-.055	-.006	-.005
	Health Information Apprehension	0.067	0.112	0.031	0.596	.551	.161	.032	.028
	Intellectual Humility	-0.014	0.011	-0.072	-1.342	.181	-.116	-.072	-.064
	News Source Use	0.178	0.082	0.110	2.176	.030*	.104	.116	.103
	Academic Source Use	0.032	0.080	0.021	0.404	.686	.064	.022	.019
	Direct Source Use	-0.014	0.081	-0.009	-0.169	.866	.003	-.009	-.008
	Online Source Use	0.009	0.088	0.006	0.106	.916	.044	.006	.005
	Social Media Use	0.111	0.077	0.078	1.454	.147	.100	.078	.069
	Health Latent Class Membership	-0.019	0.219	-0.004	-0.087	.931	.001	-.005	-.004
3	$\Delta F(22, 337) = 0.55$, $p = .84$, $\Delta R^2 = .01$								
	(Constant)	2.268	1.098		2.065	.040			
	Self-Esteem	0.126	0.019	0.359	6.730	<.001**	.365	.344	.322
	Sex at Birth	-0.911	0.241	-0.187	-3.776	<.001**	-.206	-.201	-.181
	Difficulty Paying Bills	0.329	0.115	0.141	2.847	.005*	.166	.153	.136
	Information Competency	7.320E-05	8.60E-05	0.146	0.851	.395	-.051	.046	.041
	Health Information Engagement	-0.004	0.093	-0.008	-0.045	.964	-.055	-.002	-.002
	Health Information Apprehension	0.590	0.351	0.272	1.681	.094	.161	.091	.080

Note: * p < .05; ** p < .001

	Unstandardized Coefficients		Standardized Coefficients			Correlations		
Model	*B*	Std. Error	Beta	*t*	*p*	Zero-order	Partial	Part
Intellectual Humility	-0.004	0.035	-0.020	-0.114	.909	-.116	-.006	-.005
News Source Use	0.331	0.266	0.204	1.245	.214	.104	.068	.060
Academic Source Use	-0.105	0.273	-0.067	-0.384	.701	.064	-.021	-.018
Direct Source Use	0.345	0.282	0.223	1.225	.222	.003	.067	.059
Online Source Use	0.097	0.286	0.059	0.339	.735	.044	.018	.016
Social Media Use	0.040	0.253	0.028	0.159	.873	.100	.009	.008
Health Latent Class Membership	0.801	0.831	0.176	0.964	.336	.001	.052	.046
Competency X Latent Class Interaction	-3.453E-05	6.80E-05	-0.089	-0.508	.612	-.061	-.028	-.024
Information Engagement X Latent Class Interaction	0.004	0.078	0.009	0.051	.959	-.073	.003	.002
Information Apprehension X Latent Class Interaction	-0.452	0.281	-0.261	-1.608	.109	.144	-.087	-.077
News Use X Latent Class Interaction	-0.137	0.210	-0.113	-0.652	.515	.093	-.035	-.031
Academic Use X Latent Class Interaction	0.120	0.224	0.106	0.534	.594	.049	.029	.026
Direct Use X Latent Class Interaction	-0.318	0.235	-0.317	-1.354	.177	-.004	-.074	-.065
Online Use X Latent Class Interaction	-0.079	0.231	-0.077	-0.342	.733	.027	-.019	-.016
Social Use X Latent Class Interaction	0.063	0.206	0.069	0.305	.760	.073	.017	.015
Intellectual Humility X Latent Class Interaction	-0.009	0.028	-0.058	-0.324	.746	-.130	-.018	-.016

Note. * $p < .05$; ** $p < .001$

Table 36. Logistic Regression Analysis Examining Latent Class Membership Moderation Effects on Academic Search Behaviors

							95% C.I.for EXP(B)	
		B	S.E.	Wald	df	*p*	OR	Lower	Upper
Block 1	$X^2(4, N = 388) = 23.02, p < .001$; Nagelkerke R = .11								
	Self-Esteem	0.085	0.033	6.770	1	.009	1.089	1.021	1.162
	Social Desirability	0.181	0.063	8.203	1	.004	1.198	1.059	1.356
	Age	-0.214	0.106	4.069	1	.044	0.807	0.656	0.994
	Semester Credits Completed	-4.19E-04	1.22E-04	11.739	1	.001	1.000	0.999	1.000
	Constant	3.292	2.115	2.422	1	.120	26.892		
Block 2	$X^2(10, N = 388) = 19.23, p = .04$; Nagelkerke R = .19								
	Self-Esteem	0.066	0.035	3.526	1	.060	1.068	0.997	1.145
	Social Desirability	0.209	0.070	9.042	1	.003*	1.233	1.076	1.413
	Age	-0.248	0.111	4.955	1	.026*	0.780	0.627	0.971
	Semester Credits Completed	-4.54E-04	1.30E-04	12.199	1	<.001**	1.000	0.999	1.000
	Information Competency	-1.91E-05	4.95E-05	0.149	1	.699	1.000	1.000	1.000
	Academic Information Engagement	0.041	0.048	0.733	1	.392	1.042	0.948	1.145
	Academic Information Apprehension	0.632	0.221	8.202	1	.004*	1.882	1.221	2.901
	Intellectual Humility	0.019	0.021	0.820	1	.365	1.020	0.978	1.063
	News Source Use	0.091	0.149	0.371	1	.542	1.095	0.817	1.467
	Academic Source Use	0.146	0.149	0.962	1	.327	1.158	0.864	1.551
	Direct Source Use	0.026	0.141	0.034	1	.853	1.027	0.778	1.354
	Online Source Use	0.065	0.172	0.145	1	.703	1.068	0.763	1.495
	Social Media Source Use	-0.131	0.145	0.826	1	.363	0.877	0.660	1.164
	Health Latent Class Membership	-0.813	0.332	6.001	1	.014*	0.444	0.232	0.850
	Constant	4.834	2.375	4.141	1	.042	125.664		
Block 3	$X^2(9, N = 388) = 5.88, p = .75$; Nagelkerke R = .21								
	Self-Esteem	0.071	0.036	3.825	1	.050	1.073	1.000	1.152
	Social Desirability	0.222	0.073	9.391	1	.002*	1.249	1.083	1.440
	Age	-0.278	0.115	5.823	1	.016*	0.757	0.604	0.949
	Semester Credits Completed	-4.76E-04	1.35E-04	12.505	1	<.001**	1.000	0.999	1.000
	Information Competency	-4.18E-05	1.54E-04	0.074	1	.786	1.000	1.000	1.000
	Academic Information Engagement	0.209	0.150	1.933	1	.164	1.233	0.918	1.655
	Academic Information Apprehension	1.200	0.671	3.198	1	.074	3.320	0.891	12.366

Note: * p < .05; ** p < .001

							95% C.I.for EXP(B)	
	B	S.E.	Wald	df	*p*	OR	Lower	Upper
Intellectual Humility	-0.023	0.067	0.113	1	.736	0.978	0.857	1.115
News Source Use	-0.253	0.469	0.291	1	.590	0.777	0.310	1.948
Academic Source Use	-0.546	0.465	1.380	1	.240	0.579	0.233	1.440
Direct Source Use	0.180	0.436	0.171	1	.680	1.197	0.509	2.816
Online Source Use	0.259	0.524	0.244	1	.622	1.295	0.464	3.619
Social Media Source Use	-0.188	0.452	0.173	1	.677	0.828	0.341	2.010
Academic Latent Class Membership	-1.593	1.311	1.477	1	.224	0.203	0.016	2.654
Competency X Latent Class Interaction	1.99E-05	1.02E-04	0.025	1	.874	1.000	1.000	1.000
Information Engagement X Latent Class Interaction	-0.117	0.101	1.336	1	.248	0.889	0.729	1.085
Information Apprehension X Latent Class Interaction	-0.381	0.438	0.759	1	.384	0.683	0.290	1.610
News Use X Latent Class Interaction	0.208	0.317	0.432	1	.511	1.231	0.662	2.290
Academic Use X Latent Class Interaction	0.480	0.318	2.283	1	.131	1.616	0.867	3.013
Direct Use X Latent Class Interaction	-0.097	0.302	0.103	1	.749	0.908	0.503	1.640
Online Use X Latent Class Interaction	-0.127	0.357	0.127	1	.721	0.880	0.437	1.773
Social Use X Latent Class Interaction	0.042	0.304	0.019	1	.891	1.042	0.574	1.893
Intellectual Humility X Latent Class Interaction	0.028	0.046	0.381	1	.537	1.028	0.941	1.125
Constant	6.546	3.039	4.640	1	.031	696.259		

Note: * $p < .05$; ** $p < .001$

Table 37. Hierarchical Multiple Regression Analysis Examining Latent Class Membership Moderation Effects on Health Search Behaviors

							95% C.I.for EXP(B)	
		B	S.E.	Wald	df	*p*	OR	Lower	Upper
Block 1	$X^2(1, N = 399) = 10.17$, $p = .002$; Nagelkerke R = .04								
	Social Desirability	0.169	0.054	9.661	1	.002*	1.184	1.064	1.317
	Constant	-1.747	0.145	144.643	1	<.001	0.174		
Block 2	$X^2(10, N = 399) = 11.06$, $p = .35$; Nagelkerke R = .09								
	Social Desirability	0.200	0.060	10.996	1	<.001**	1.222	1.085	1.376
	Information Competency	-4.86E-05	4.57E-05	1.134	1	.287	1.000	1.000	1.000
	Health Information Engagement	0.073	0.044	2.724	1	.099	1.076	0.986	1.174
	Health Information Apprehension	0.269	0.189	2.038	1	.153	1.309	0.904	1.894
	Intellectual Humility	-0.012	0.018	0.461	1	.497	0.988	0.953	1.024
	News Source Use	0.069	0.138	0.254	1	.614	1.072	0.818	1.405
	Academic Source Use	0.028	0.133	0.044	1	.834	1.028	0.793	1.333
	Direct Source Use	0.123	0.131	0.886	1	.347	1.131	0.875	1.461
	Online Source Use	0.127	0.146	0.754	1	.385	1.136	0.852	1.513
	Social Media Source Use	-0.167	0.124	1.808	1	.179	0.846	0.664	1.079
	Health Latent Class Membership	-0.477	0.412	1.340	1	.247	0.620	0.277	1.392
	Constant	-1.615	0.713	5.133	1	.023*	0.199		
Block 3	$X^2(9, N = 399) = 6.90$, $p = .65$; Nagelkerke R = .12								
	Social Desirability	0.197	0.061	10.475	1	.001*	1.218	1.081	1.373
	Information Competency	-1.20E-04	1.65E-04	0.531	1	.466	1.000	1.000	1.000
	Health Information Engagement	-0.184	0.208	0.782	1	.377	0.832	0.553	1.251
	Health Information Apprehension	-0.341	0.675	0.254	1	.614	0.711	0.189	2.673
	Intellectual Humility	0.036	0.066	0.296	1	.586	1.037	0.911	1.180
	News Source Use	0.676	0.519	1.696	1	.193	1.967	0.711	5.443
	Academic Source Use	0.362	0.527	0.473	1	.492	1.437	0.511	4.037
	Direct Source Use	-0.243	0.574	0.180	1	.672	0.784	0.255	2.415
	Online Source Use	-0.444	0.638	0.485	1	.486	0.641	0.184	2.239
	Social Media Source Use	0.004	0.506	6.39E-05	1	.994	1.004	0.372	2.707
	Health Latent Class Membership	-1.400	1.905	0.540	1	.463	0.247	0.006	10.321
	Competency X Latent Class Interaction	4.62E-05	1.38E-04	0.111	1	.739	1.000	1.000	1.000

Note: * p < .05; ** p < .001

	B	S.E.	Wald	df	*p*	OR	95% C.I.for EXP(B)	
							Lower	Upper
Information Engagement X Latent Class Interaction	0.238	0.192	1.532	1	.216	1.268	0.870	1.848
Information Apprehension X Latent Class Interaction	0.546	0.584	0.875	1	.350	1.726	0.550	5.420
News Use X Latent Class Interaction	-0.534	0.448	1.424	1	.233	0.586	0.244	1.410
Academic Use X Latent Class Interaction	-0.319	0.465	0.471	1	.493	0.727	0.292	1.809
Direct Use X Latent Class Interaction	0.338	0.521	0.420	1	.517	1.401	0.505	3.890
Online Use X Latent Class Interaction	0.539	0.577	0.874	1	.350	1.715	0.554	5.311
Social Use X Latent Class Interaction	-0.169	0.451	0.141	1	.707	0.844	0.349	2.044
Intellectual Humility X Latent Class Interaction	-0.042	0.056	0.549	1	.459	0.959	0.859	1.071
Constant	-0.694	2.176	0.102	1	.750	0.499		

Note: * $p < .05$; ** $p < .001$

Table 38. Logistic Regression Analysis Examining Intellectual Humility Moderation Effects on Academic Search Behaviors

							95% C.I.for EXP(B)	
		B	S.E.	Wald	df	*p*	OR	Lower	Upper
Block 1	$X^2(4, N = 388) = 23.02, p < .001$; Nagelkerke R = .11								
	Self-Esteem	0.085	0.033	6.770	1	.009*	1.089	1.021	1.162
	Social Desirability	0.181	0.063	8.203	1	.004*	1.198	1.059	1.356
	Age	-0.214	0.106	4.069	1	.044*	0.807	0.656	0.994
	Semester Credits Completed	-4.19E-04	1.22E-04	11.739	1	.001*	1.000	0.999	1.000
	Constant	3.292	2.115	2.422	1	.120	26.892		
Block 2	$X^2(10, N = 388) = 19.23, p = .04$; Nagelkerke R = .19								
	Self-Esteem	0.066	0.035	3.526	1	.060	1.068	0.997	1.145
	Social Desirability	0.209	0.070	9.042	1	.003*	1.233	1.076	1.413
	Age	-0.248	0.111	4.955	1	.026*	0.780	0.627	0.971
	Semester Credits Completed	-4.54E-04	1.30E-04	12.199	1	<.001**	1.000	0.999	1.000
	Information Competency	-1.91E-05	4.95E-05	0.149	1	.699	1.000	1.000	1.000
	Academic Information Engagement	0.041	0.048	0.733	1	.392	1.042	0.948	1.145
	Academic Information Apprehension	0.632	0.221	8.202	1	.004*	1.882	1.221	2.901
	Intellectual Humility	0.019	0.021	0.820	1	.365	1.020	0.978	1.063
	News Source Use	0.091	0.149	0.371	1	.542	1.095	0.817	1.467
	Academic Source Use	0.146	0.149	0.962	1	.327	1.158	0.864	1.551
	Direct Source Use	0.026	0.141	0.034	1	.853	1.027	0.778	1.354
	Online Source Use	0.065	0.172	0.145	1	.703	1.068	0.763	1.495
	Social Media Source Use	-0.131	0.145	0.826	1	.363	0.877	0.660	1.164
	Academic Latent Class Membership	-0.813	0.332	6.001	1	.014*	0.444	0.232	0.850
	Constant	4.834	2.375	4.141	1	.042*	125.664		
Block 3	$X^2(9, N = 388) = 12.60, p = .18$; Nagelkerke R = .24								
	Self-Esteem	0.062	0.036	2.868	1	.090	1.063	0.990	1.142
	Social Desirability	0.223	0.073	9.357	1	.002*	1.250	1.084	1.443
	Age	-0.259	0.115	5.067	1	.024*	0.772	0.616	0.967
	Semester Credits Completed	-4.76E-04	1.36E-04	12.145	1	<.001**	1.000	0.999	1.000
	Information Competency	-2.51E-05	5.13E-05	0.239	1	.625	1.000	1.000	1.000
	Academic Information Engagement	0.021	0.051	0.174	1	.677	1.021	0.925	1.128
	Academic Information Apprehension	0.785	0.235	11.145	1	.001*	2.193	1.383	3.477

Note: * p < .05; ** p < .001

							95% C.I.for EXP(B)	
	B	S.E.	Wald	df	*p*	OR	Lower	Upper
Intellectual Humility	0.163	0.110	2.202	1	.138	1.177	0.949	1.461
News Source Use	-0.014	0.161	0.007	1	.932	0.986	0.719	1.353
Academic Source Use	0.183	0.155	1.402	1	.236	1.201	0.887	1.627
Direct Source Use	-0.024	0.146	0.027	1	.869	0.976	0.733	1.301
Online Source Use	0.311	0.212	2.148	1	.143	1.364	0.901	2.067
Social Media Source Use	-0.216	0.169	1.629	1	.202	0.806	0.578	1.123
Academic Latent Class Membership	-0.834	0.347	5.793	1	.016*	0.434	0.220	0.856
Competency X Humility Interaction	1.97E-06	5.92E-06	0.110	1	.740	1.000	1.000	1.000
Information Engagement X Humility Interaction	-0.004	0.006	0.567	1	.451	0.996	0.985	1.007
Information Apprehension X Humility Interaction	-0.015	0.024	0.385	1	.535	0.985	0.940	1.033
News Use X Humility Interaction	0.015	0.019	0.651	1	.420	1.015	0.979	1.053
Academic Use X Humility Interaction	0.007	0.017	0.166	1	.684	1.007	0.973	1.042
Direct Use X Humility Interaction	2.15E-05	0.019	1.35E-06	1	.999	1.000	0.964	1.037
Online Use X Humility Interaction	-0.072	0.023	9.647	1	.002*	0.931	0.889	0.974
Social Use X Humility Interaction	0.008	0.017	0.190	1	.663	1.008	0.974	1.042
Latent Class X Humility Interaction	0.001	0.043	1.62E-04	1	.990	1.001	0.921	1.087
Constant	4.828	2.482	3.783	1	.052	124.982		

Note: * $p < .05$; ** $p < .001$

Table 39. Hierarchical Multiple Regression Analysis Examining Intellectual Humility Moderation Effects on Health Search Behaviors

							95% C.I.for EXP(B)	
		B	S.E.	Wald	df	*p*	OR	Lower	Upper
Block 1	$X^2(1, N = 399) = 10.17, p = .001$; Nagelkerke R = .04								
	Social Desirability	0.169	0.054	9.661	1	.002*	1.184	1.064	1.317
	Constant	-1.747	0.145	144.643	1	<.001	0.174		
Block 2	$X^2(10, N = 399) = 11.06, p = .35$; Nagelkerke R = .09								
	Social Desirability	0.200	0.060	10.996	1	<.001**	1.222	1.085	1.376
	Information Competency	-4.86E-05	4.57E-05	1.134	1	.287	1.000	1.000	1.000
	Health Information Engagement	0.073	0.044	2.724	1	.099	1.076	0.986	1.174
	Health Information Apprehension	0.269	0.189	2.038	1	.153	1.309	0.904	1.894
	Intellectual Humility	-0.012	0.018	0.461	1	.497	0.988	0.953	1.024
	News Source Use	0.069	0.138	0.254	1	.614	1.072	0.818	1.405
	Academic Source Use	0.028	0.133	0.044	1	.834	1.028	0.793	1.333
	Direct Source Use	0.123	0.131	0.886	1	.347	1.131	0.875	1.461
	Online Source Use	0.127	0.146	0.754	1	.385	1.136	0.852	1.513
	Social Media Source Use	-0.167	0.124	1.808	1	.179	0.846	0.664	1.079
	Health Latent Class Membership	-0.477	0.412	1.340	1	.247	0.620	0.277	1.392
	Constant	-1.615	0.713	5.133	1	.023*	0.199		
Block 3	$X^2(9, N = 399) = 13.03, p = .16$; Nagelkerke R = .14								
	Social Desirability	0.208	0.062	11.345	1	.001*	1.231	1.091	1.389
	Information Competency	-4.70E-05	4.64E-05	1.023	1	.312	1.000	1.000	1.000
	Health Information Engagement	0.064	0.047	1.880	1	.170	1.066	0.973	1.169
	Health Information Apprehension	0.289	0.195	2.209	1	.137	1.335	0.912	1.956
	Intellectual Humility	0.150	0.092	2.645	1	.104	1.162	0.970	1.393
	News Source Use	0.081	0.148	0.302	1	.583	1.084	0.812	1.448
	Academic Source Use	0.022	0.138	0.025	1	.875	1.022	0.779	1.340
	Direct Source Use	0.091	0.135	0.451	1	.502	1.095	0.840	1.426
	Online Source Use	0.185	0.160	1.339	1	.247	1.203	0.880	1.646
	Social Media Source Use	-0.149	0.132	1.275	1	.259	0.861	0.664	1.116
	Health Latent Class Membership	-0.540	0.432	1.565	1	.211	0.583	0.250	1.358
	Competency X Humility Interaction	1.01E-06	5.09E-06	0.040	1	.842	1.000	1.000	1.000

Note: * p < .05; ** p < .001

							95% C.I.for EXP(B)	
	B	S.E.	Wald	df	*p*	OR	Lower	Upper
	0.004	0.005	0.795	1	.373	1.004	0.995	1.014
Information Engagement X Humility Interaction	0.024	0.021	1.342	1	.247	1.025	0.983	1.068
Information Apprehension X Humility Interaction	-0.036	0.016	5.254	1	.022*	0.964	0.935	0.995
News Use X Humility Interaction	-0.001	0.015	0.003	1	.955	0.999	0.970	1.029
Academic Use X Humility Interaction	0.013	0.016	0.672	1	.413	1.013	0.982	1.045
Direct Use X Humility Interaction	-0.036	0.018	4.201	1	.040*	0.965	0.932	0.998
Online Use X Humility Interaction	-0.005	0.014	0.132	1	.716	0.995	0.967	1.023
Social Use X Humility Interaction	-0.020	0.047	0.182	1	.670	0.980	0.894	1.075
Latent Class X Humility Interaction	-1.773	0.762	5.410	1	.020*	0.170		
Constant	0.208	0.062	11.345	1	.001	1.231	1.091	1.389

Note: * p < .05; ** p < .001

Figure 1.

The Theory of Planned Behavior Model

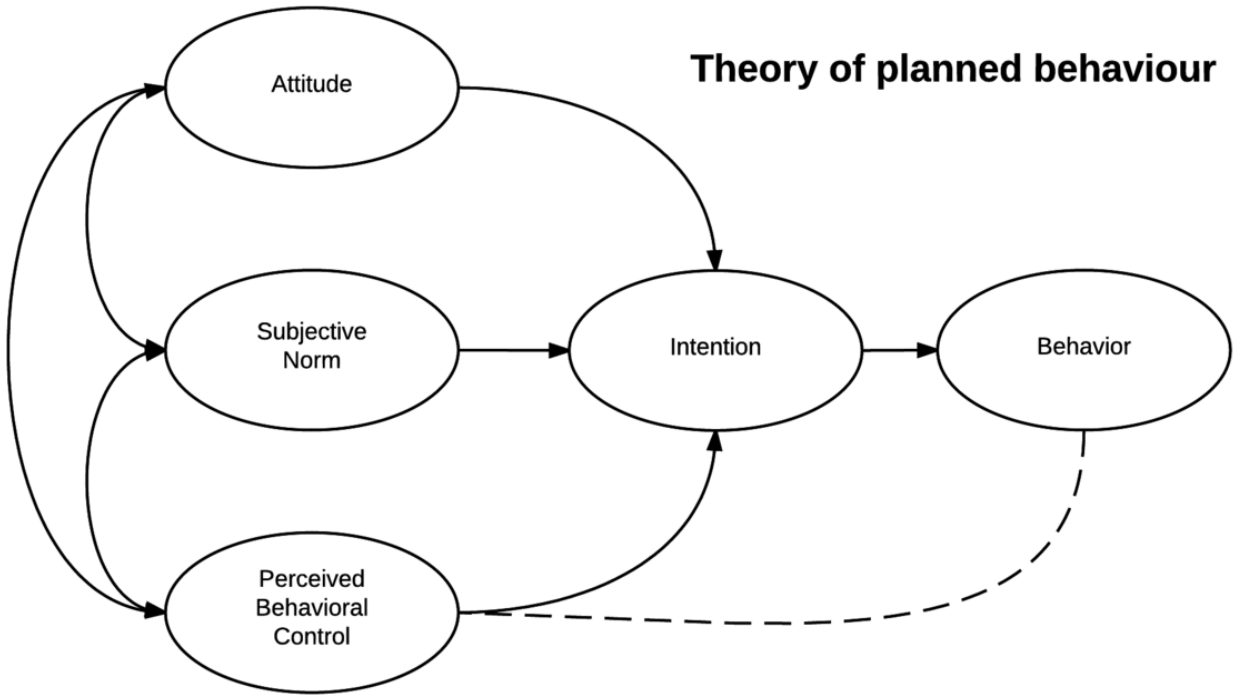
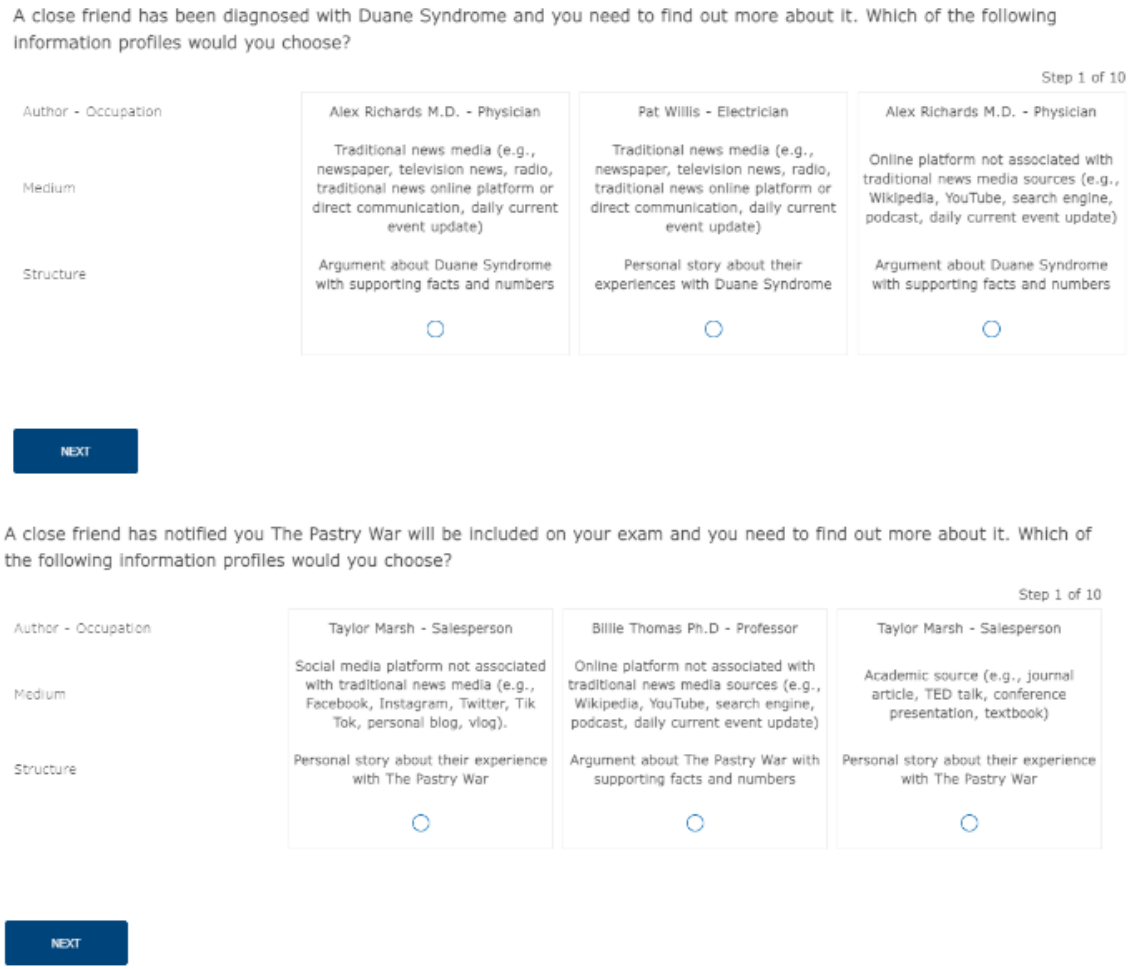


Figure 2.

Conjoint Analysis Task Examples



Note: Image includes one example task for each topic (health and academics).

Figure 3.

Visual Model of Hypothesis 1

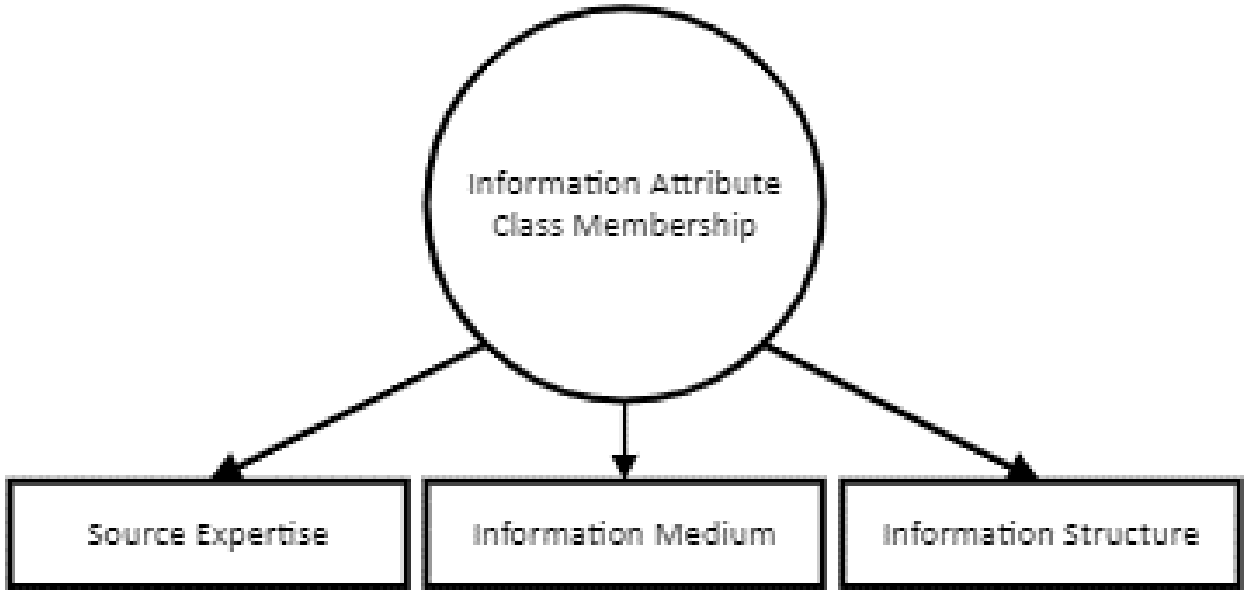


Figure 4.

Visual Model of Hypothesis 2

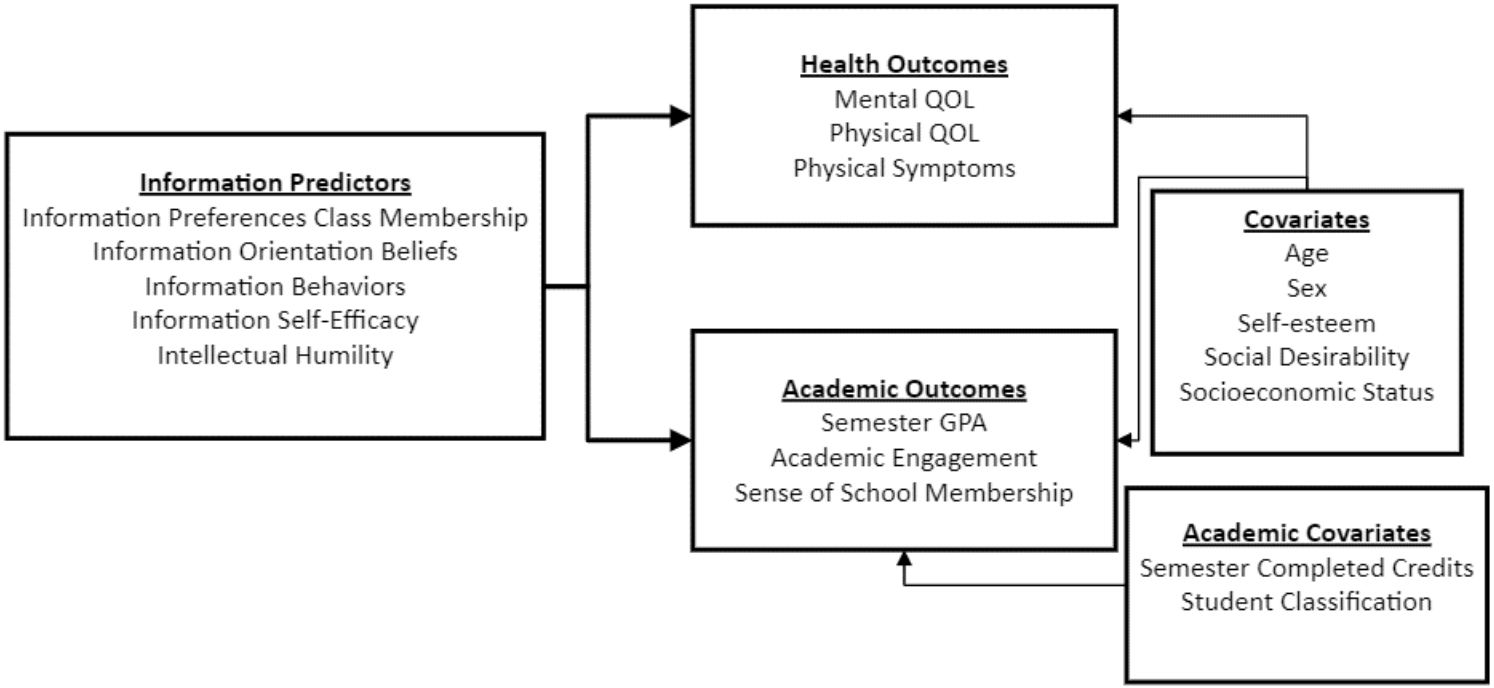


Figure 5.

Exploratory Mediation Model

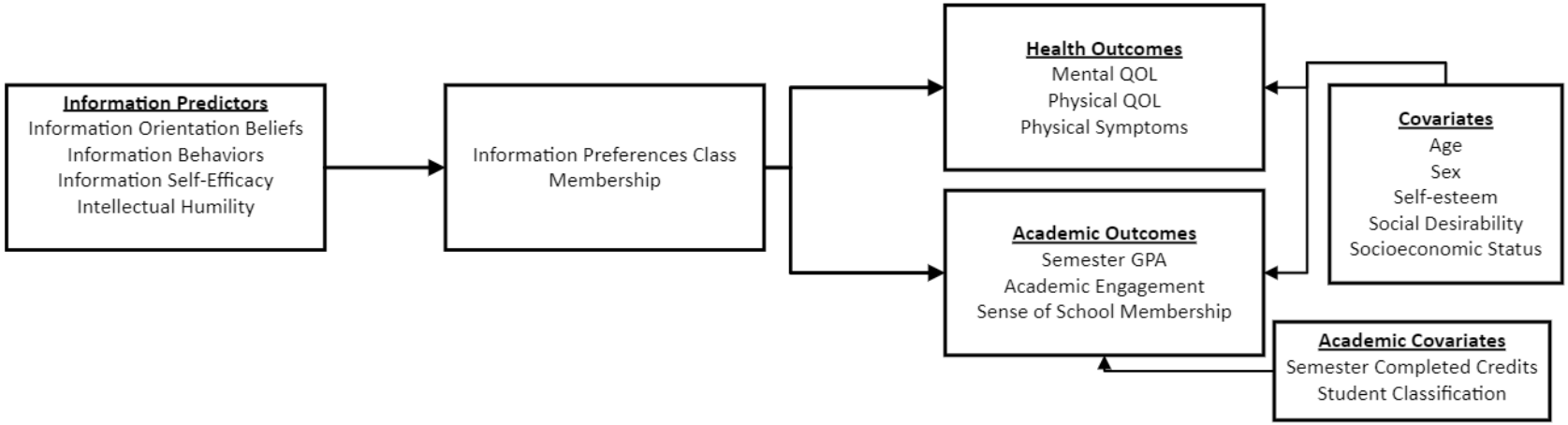


Figure 6.

Exploratory Moderation Model

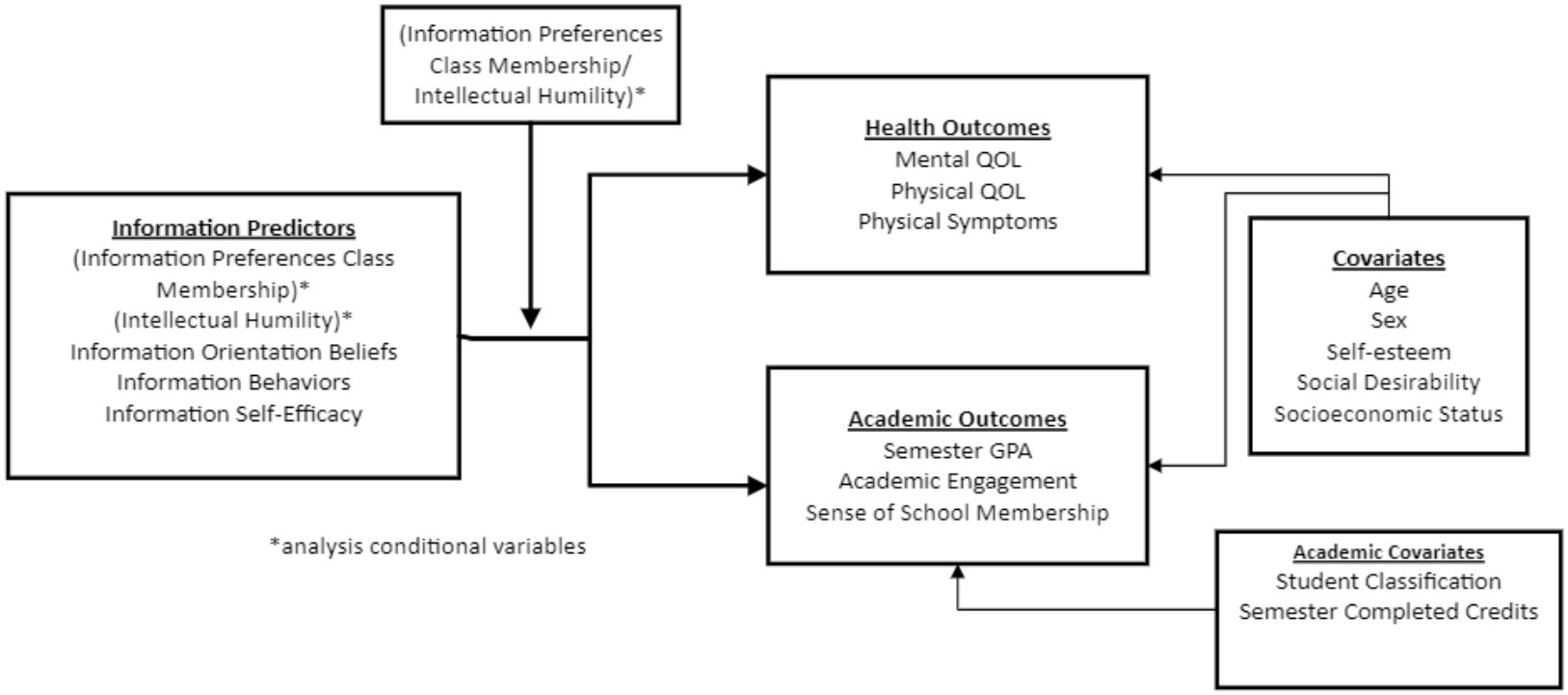
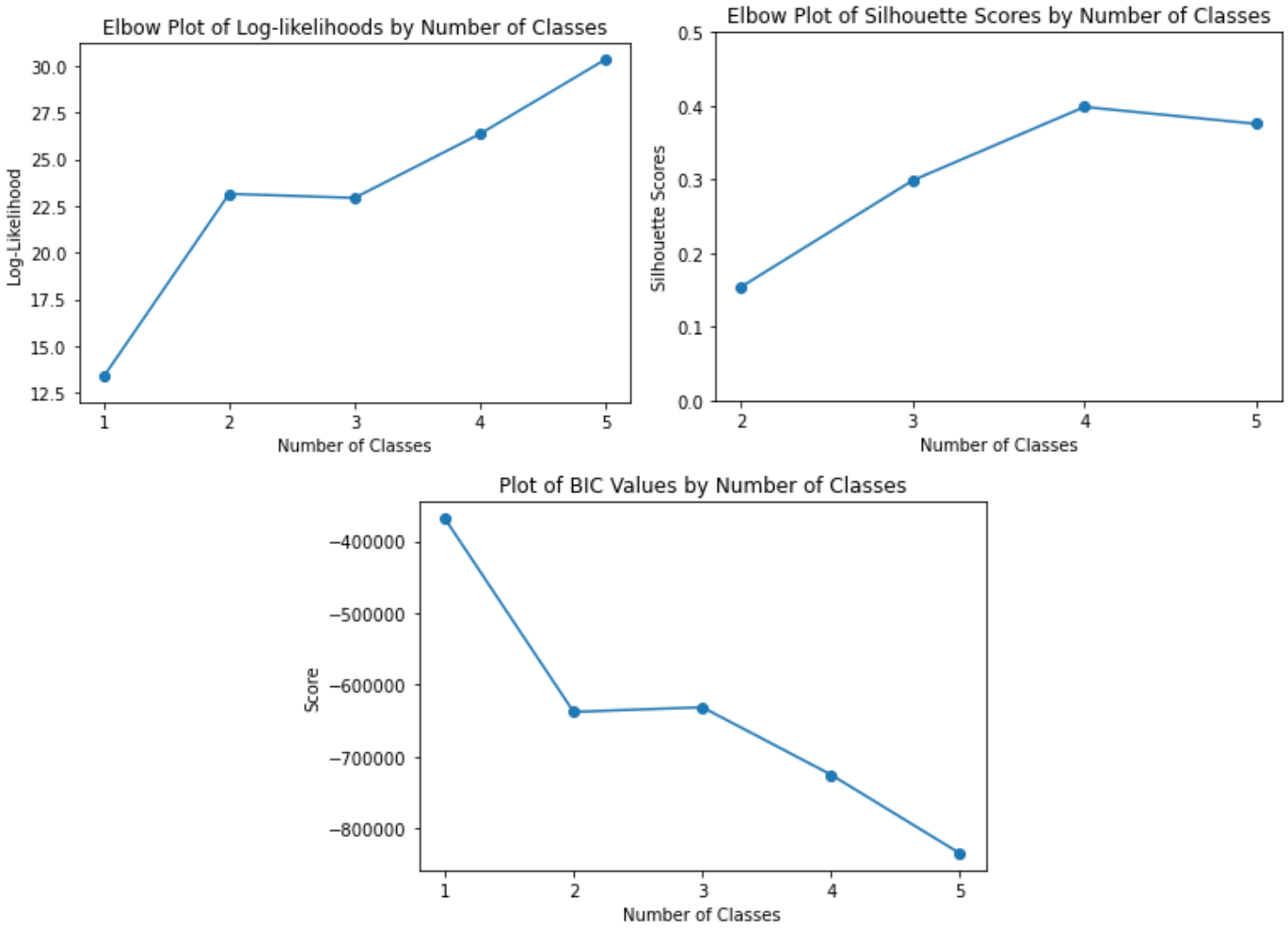


Figure 7.

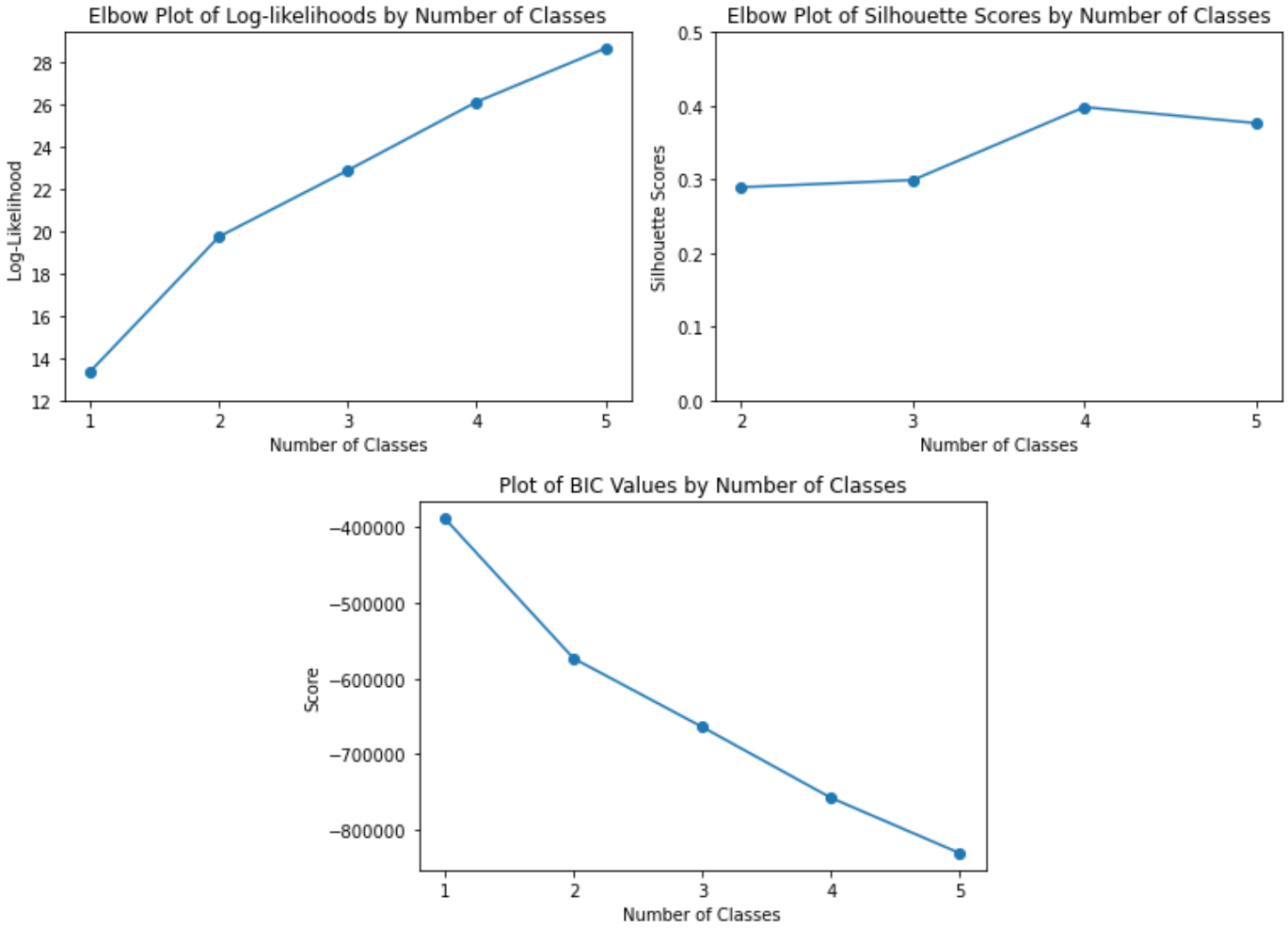
Elbow Plots for Determining Number of Classes for the Health Topic



Note. This figure displays the results of model evaluation metrics for the Latent Class Analysis for the health topic. The three subplots show the relationships between the number of classes and corresponding log-likelihood scores, silhouette scores, and Bayesian Information Criterion (BIC) scores.

Figure 8.

Elbow Plots for Determining Number of Classes for the Academic Topic



Note. This figure displays the results of model evaluation metrics for the Latent Class Analysis for the academic topic. The three subplots show the relationships between the number of classes and corresponding log-likelihood scores, silhouette scores, and Bayesian Information Criterion (BIC) scores.

Figure 9.

Preferred Attributes for the Health and Academic Latent Classes

Note. This figure displays the preferred level for each attribute included in the discrete choice model. Importance scores should only be compared within class.

Figure 10.

Conditional Effects of Social Media Source Use on Behavioral Engagement

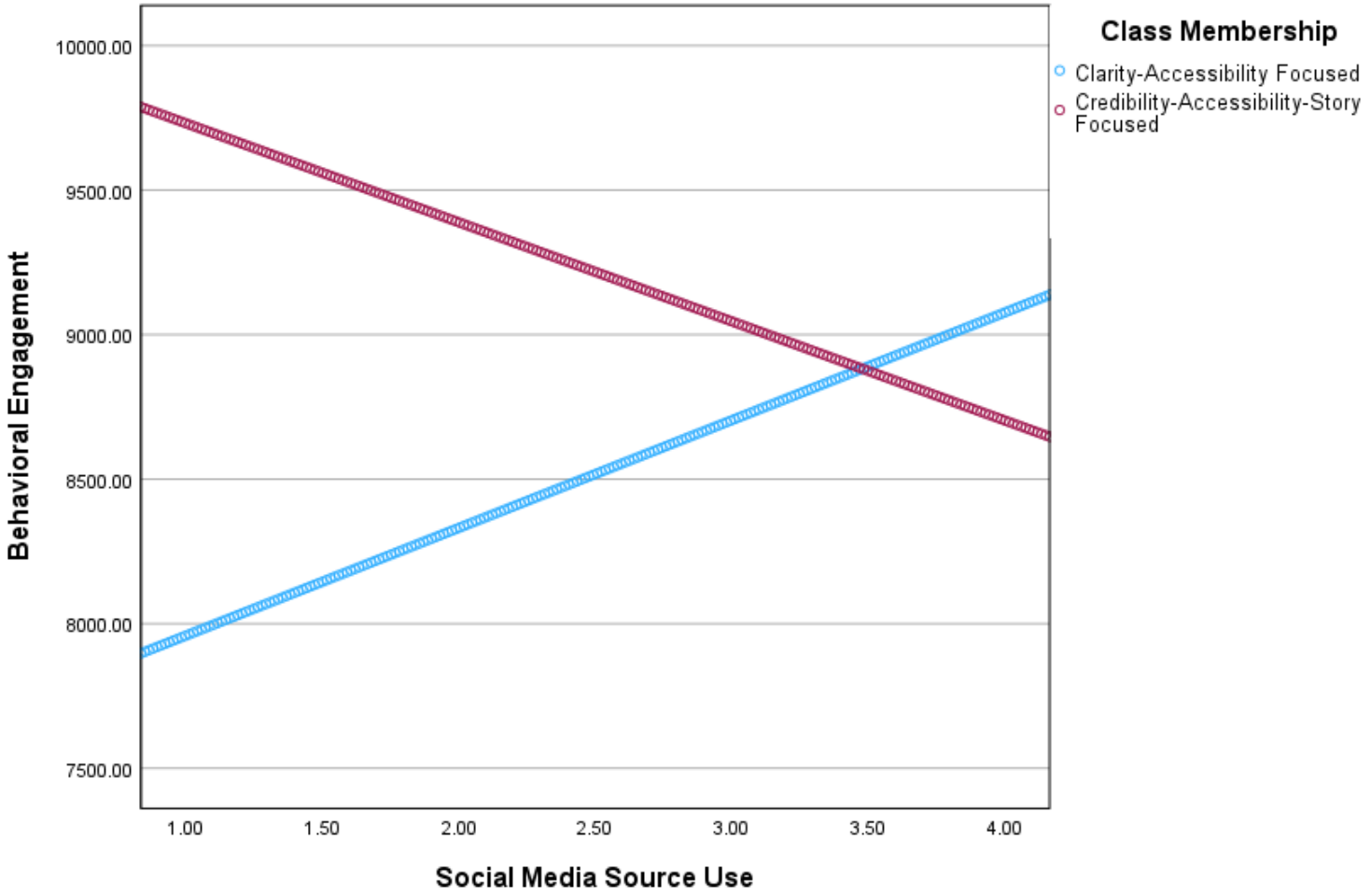


Figure 11.

Conditional Effects of Direct Source Use on Cognitive Engagement

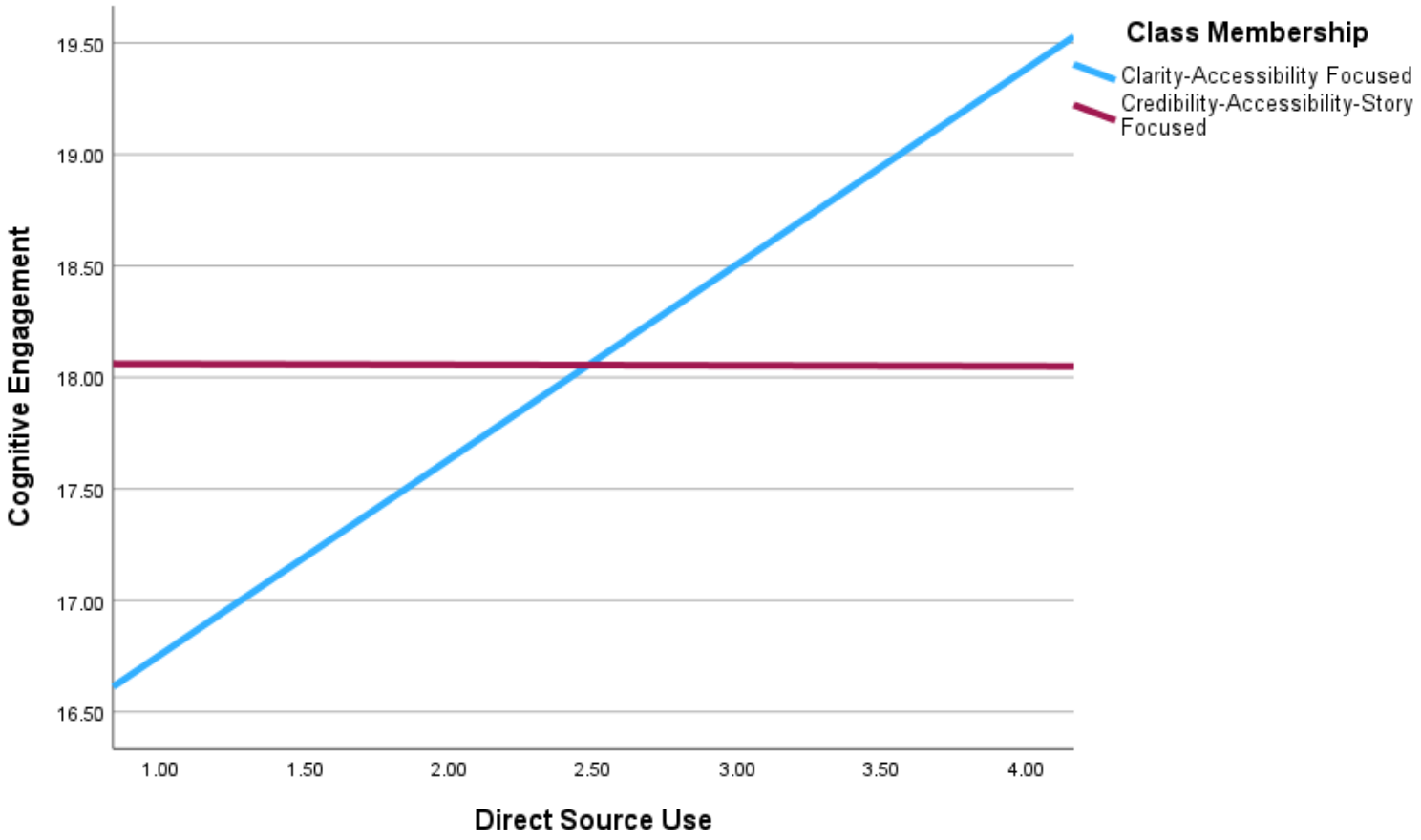


Figure 12.

Conditional Effects of Academic Source Use on Emotional Engagement

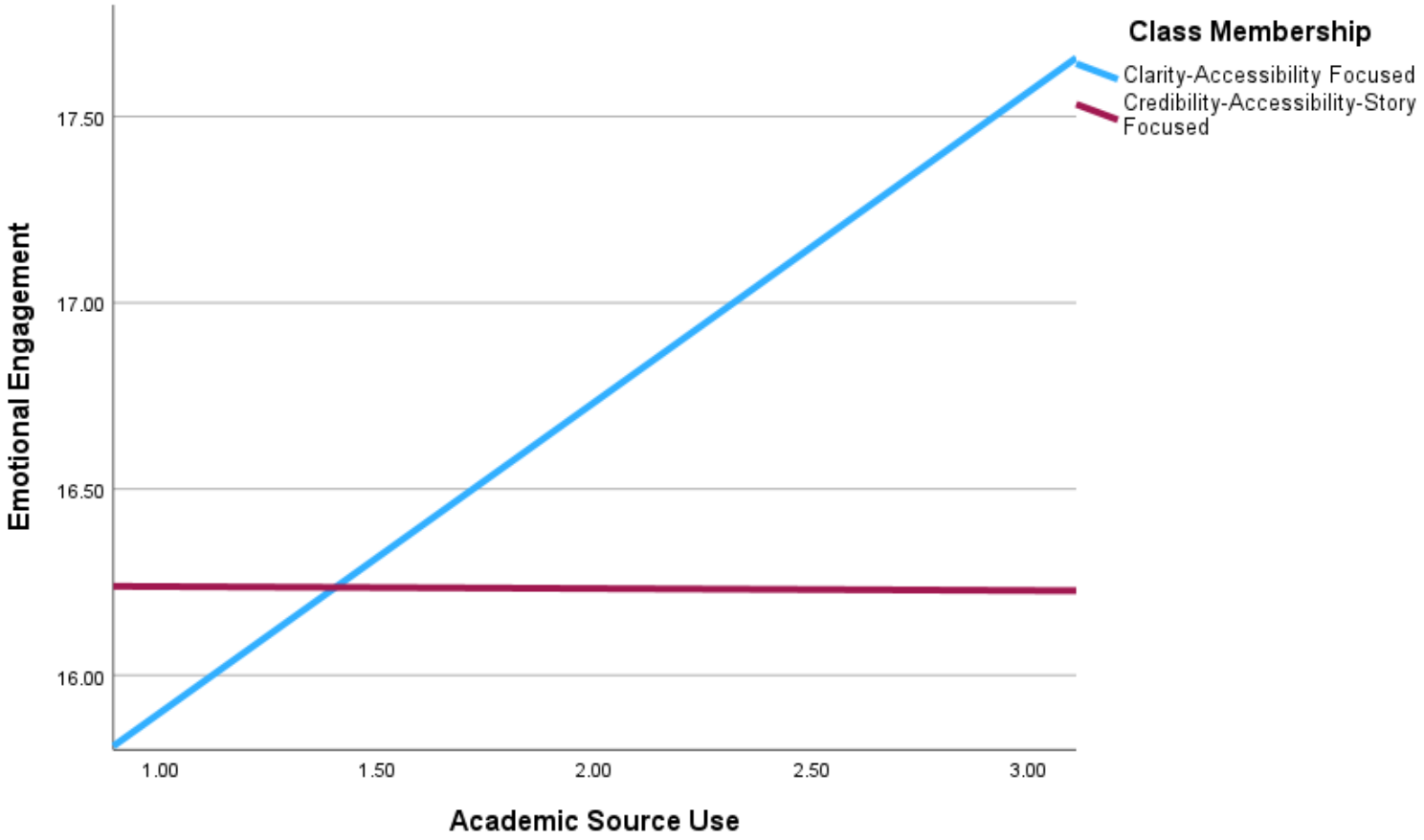


Figure 13.

Conditional Effects of Direct Source Use on Emotional Engagement

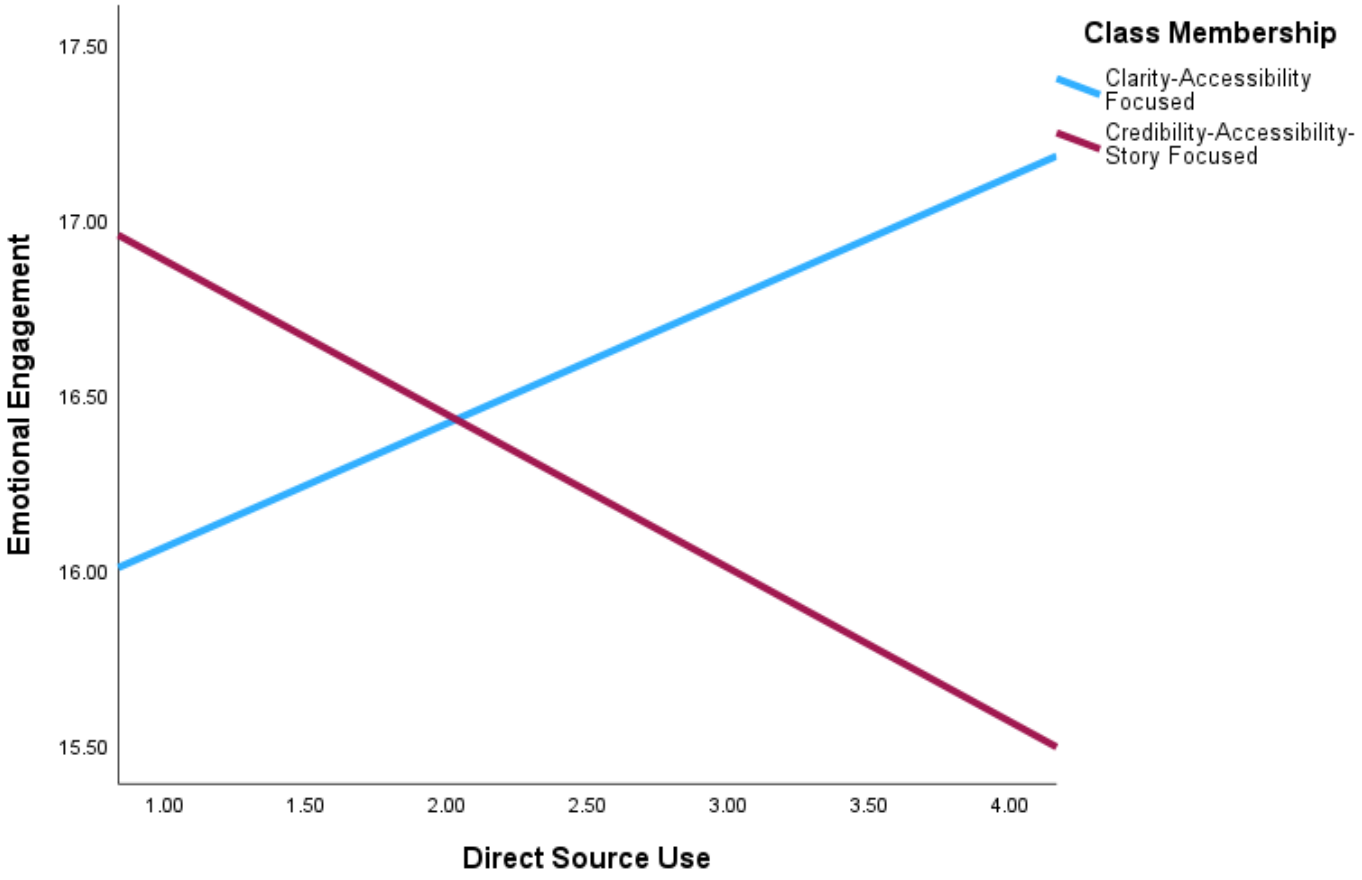


Figure 14.

Conditional Effect of Intellectual Humility on Perceived Sense of School Membership

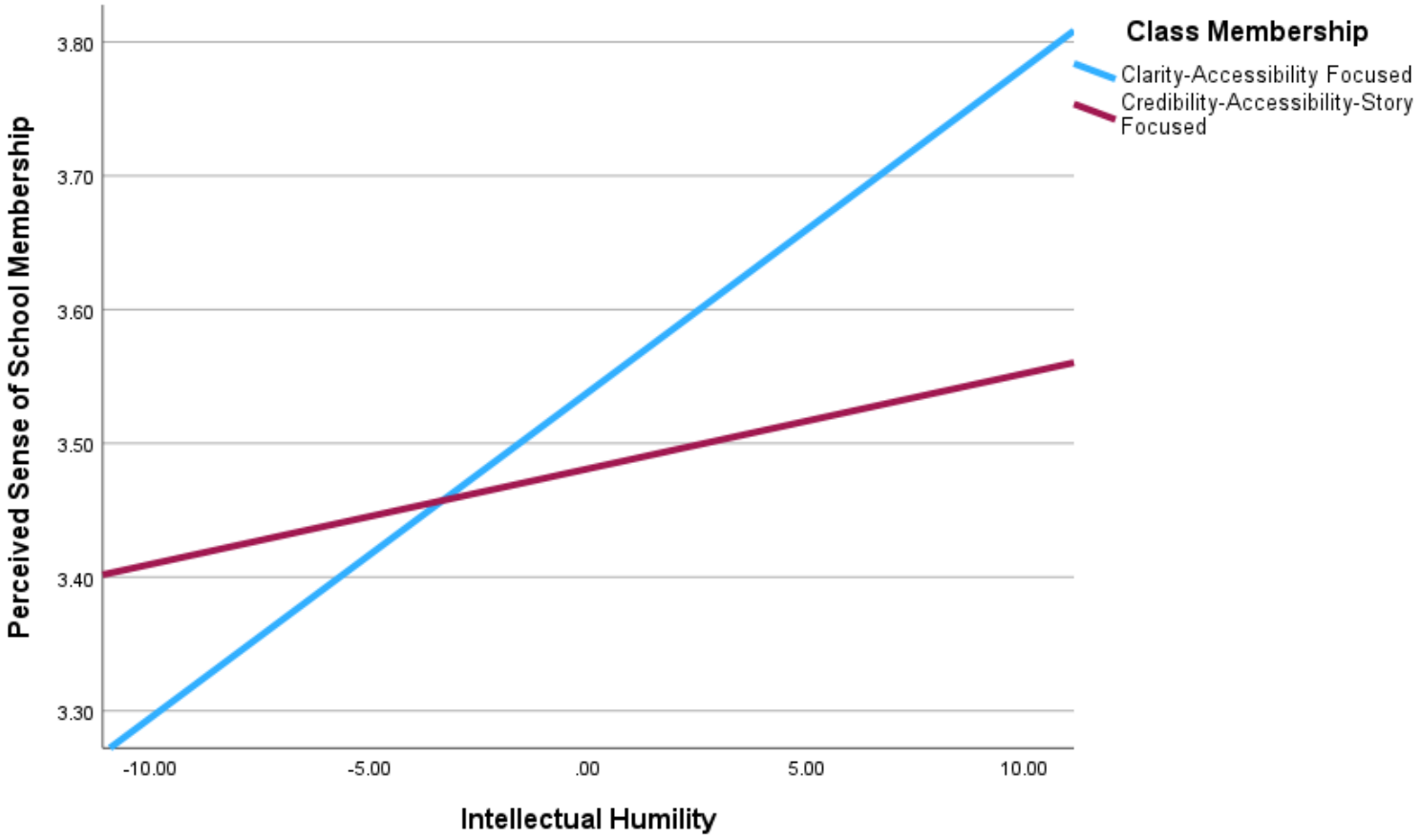
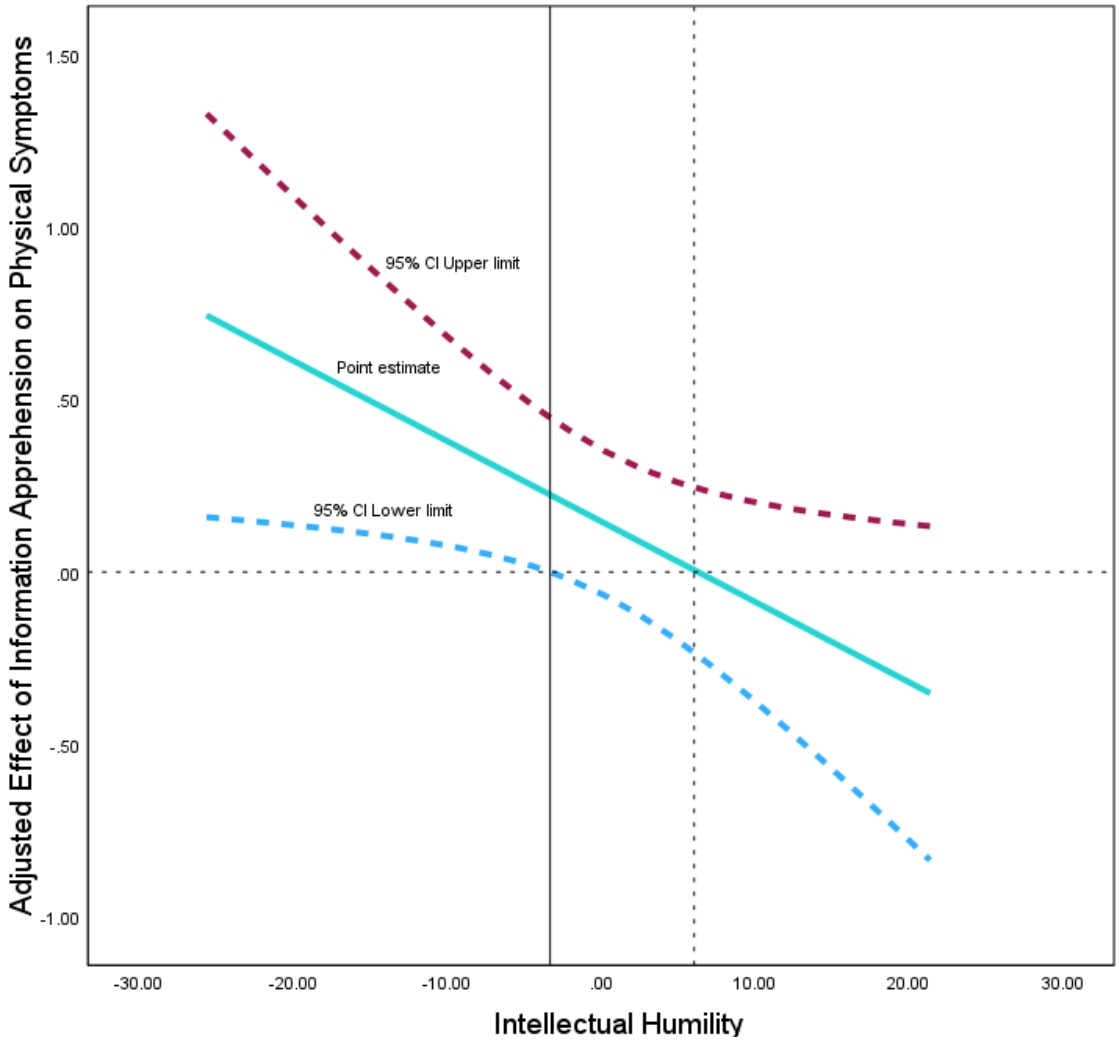


Figure 15.

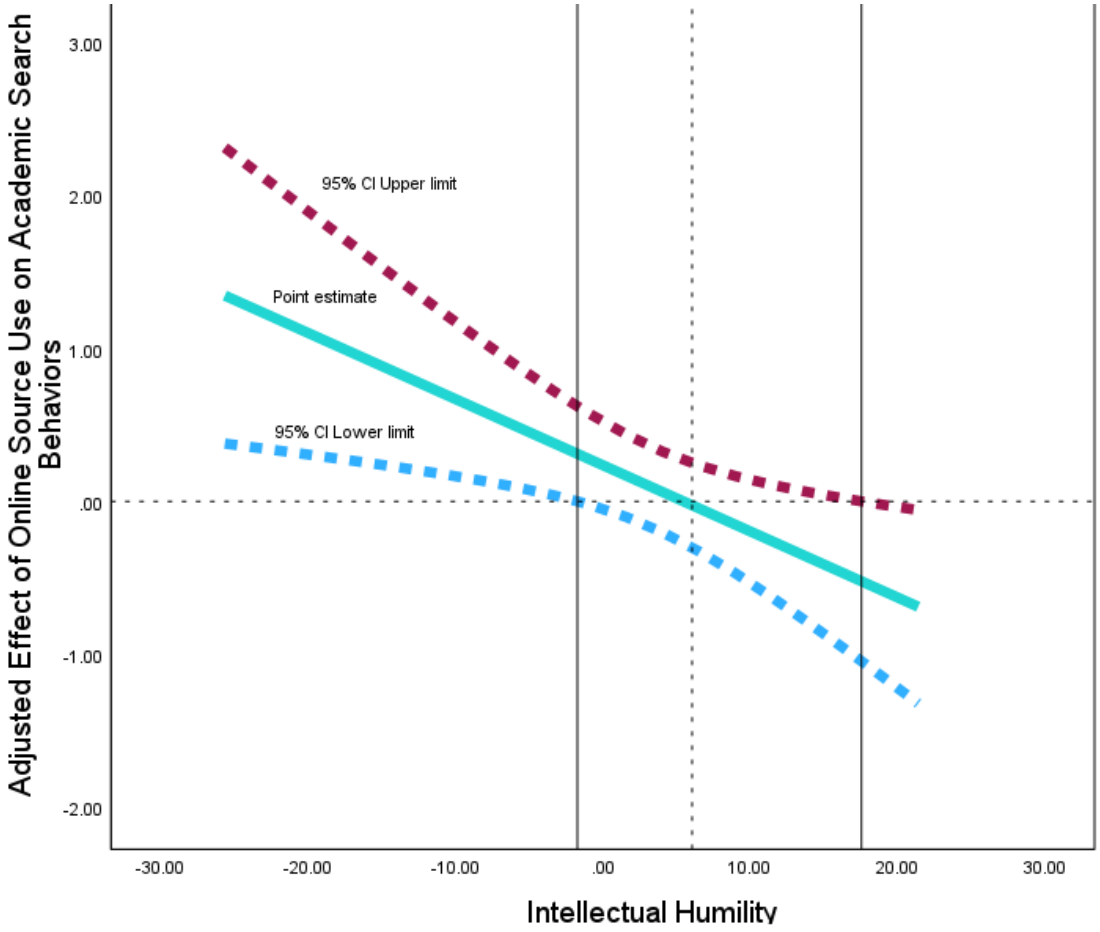
Johnson-Neyman Plot: Moderation of Intellectual Humility on the Relationship Between Information Apprehension and Physical Symptoms



Note. Johnson-Neyman values and CIs. At the moderator value of -3.03 and below (35.4% of the sample), the adjusted effect of information apprehension on physical symptoms became significant and more positive as intellectual humility decreased. As intellectual humility was mean-centered, a value of -3.03 indicates 3 points below the mean.

Figure 16.

Johnson-Neyman Plot: Moderation of Intellectual Humility on the Relationship Between Online Source Use and Academic Search Behaviors



Note. Johnson-Neyman values and CIs. At the moderator value of -1.72 and below (40.2% of the sample), the adjusted effect of online source use on academic search behaviors became significant and more negative as intellectual humility decreased Additionally, at the moderator value of 17.54 and above (2.9% of the sample), the adjusted effect of online source use on academic search behaviors became significant and more positive as intellectual humility increased. As intellectual humility was mean-centered, a value of -1.72 and 17.54 indicate that many points from the mean.

Appendix A

Initial Latent Class Result Including Those with Prior Knowledge

For the health topic, both latent classes showed the highest attribute importance for author, then the medium, and then the structure. However, the classes differed in terms of the level of each attribute they preferred. Specifically, those within Class 1 (n = 243) preferred the layman author, online medium, and statistical structure whereas those within Class 2 (n = 257) preferred the expert layman, academic medium, and story structure. A similar result was found for the academic topic latent classes with both classes placing similar importance on author and medium (Class 1: 0.41 and 0.41, Class 2: 0.42 and 0.43) and a lower importance on structure (Class 1: 0.11, Class 2: 0.15). Again, despite similar attribute importance, the preferred attributes within each class differed with those within Class 1 (n = 393) preferring an expert author, social media medium, and personal story structure and those within Class 2 (n = 107) preferred layman author, academic sources, and statistical structure. To better identify these classes, they were titled based on the attributes preferred. The health topic latent class preferring the non-expert (Class 1) was termed the “Clarity-Accessibility Focused” while the one preferring the expert (Class 2) was termed the “Credibility-Accuracy Focused”. The academic topic latent classes included high importance for author and medium and were termed accordingly with the class preferring the expert author, social media, and story structure being termed “Credibility-Accessibility Focused" and the class preferring layman, academic sources, and statistical and factual structure termed “Clarity-Accuracy Focused”.

Table A1. Attribute Importance, Overall and By Latent Class

Topic	Class	Attribute	Top Choice	Importance	95% CI
Health					
					95%
	Clarity-Accessibility Focused			Importance	CI
	n = 243	Author	Layman	0.68	0.01
		Medium	Online	0.29	0.01
		Structure	Stats	0.02	0.002
	Credibility-Accuracy Focused				
	n = 257	Author	Expert	0.74	0.01
		Medium	Academic	0.25	0.01
		Structure	Story	0.01	0.002
	Overall				
		Author	Layman	0.72	0.01
		Medium	Academic	0.27	0.01
		Structure	Sats	0.01	0.003
Academic					
	Credibility-Accessibility Focused				
	n = 393	Author	Expert	0.47	0.02
		Medium	Social Media	0.41	0.02
		Structure	Story	0.11	0.006
	Clarity-Accuracy Focused				
	n = 107	Author	Layman	0.42	0.03
		Medium	Academic	0.43	0.02
		Structure	Stats	0.15	0.03
	Overall				
		Author	Expert	0.48	0.02
		Medium	Academic	0.41	0.02
		Structure	Story	0.11	0.01