https://doi.org/10.24839/2325-7342.JN30.2.172

Intellectual Humility and Investigative Behaviors in Relation to Overclaiming of Knowledge

Emma E. Simpson and Katrina P. Jongman-Sereno*
Department of Psychology, Elon University

ABSTRACT. Fake news and other forms of misinformation are becoming increasingly prominent in today's world (Bowes & Tasimi, 2022). Research has shown that people vary in their susceptibility to believing false information (Zmigrod et al., 2019), but few studies have explored the factors that may aid people in avoiding misinformation. This study examined the relationships among intellectual humility (IH), investigative behaviors, and the tendency to overclaim knowledge of false information. Through an online survey, participants (N = 122) completed the General Intellectual Humility Scale (Leary et al., 2017), an adapted measure of investigative tendencies, and the Overclaiming Questionnaire-150 (Paulhus et al., 2003), a questionnaire that asks participants to indicate their familiarity with existent (e.g., prejudice) and nonexistent topics (e.g., consumer apparatus). Correlational analyses showed that IH was not significantly related to claiming familiarity with either real or fake topics, $r(117) = .12$, $p = .20$. However, participants who demonstrated greater IH were more willing than those with lower IH scores to investigate all topics, $r(119) = .20$, $p = .03$. Additionally, a negative correlation was found between overclaiming bias and investigative tendencies, suggesting that individuals who wanted to learn more about topics were less likely to overclaim their knowledge, $r(103) = -.40$, $p < .001$. Lastly, no significant relationship was found between IH and overclaiming of knowledge, $r(103) = -.13$, $p = .18$. People who are aware of the connections among these variables may be more likely to fact-check topics they encounter and avoid overclaiming knowledge. These findings have implications for decreasing susceptibility to false information including fake news.

Keywords: intellectual humility, overclaiming of knowledge, investigative tendencies

Open Materials badge earned for transparent research practices. Materials are available at https://osf.io/f2ytz/

Today, people in the United States are exposed to an abundance of information each day, some of which is true, but much of which is erroneously formulated by unreliable sources. *Fake news* has become the overarching term to describe misinformation in the media today, and it is capable of misguiding individuals on a variety of issues (Bowes & Tasimi, 2022; Burel et al., 2021). For instance, in the United States false claims circulated during the 2020 presidential election, including the conspiracy that voting machines were rigged to alter election results, which misled many voters and led to widespread distrust (Yen et al., 2020). Similarly, the COVID-19 pandemic generated the spread of numerous myths, including the false assertion that

COPYRIGHT 2025 BY PSI CHI, THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY (VOL. 30, NO. 2/ISSN 2325-7342)

*Faculty mentor

COVID-19 vaccines could cause side effects as severe as autism, which misinformed the public not only in the United States but in various countries worldwide (Skafle et al., 2022). This illustrates how fake news can engender bias in people's decision-making and behavior, and highlights the importance of understanding what makes one susceptible to false information.

In an attempt to reduce one's susceptibility to false information, it is important to learn more about what allows people to discriminate between facts and nonfacts. Previous research has studied how intellectual humility (IH), or one's openness to the idea that one's beliefs may be wrong, is related to discernment between true and false information (Bowes & Tasimi, 2022; Koetke, Schumann, Porter, & Smilo-Morgan, 2022; Leary et al., 2017). The present study aimed to answer whether individual differences in IH may relate to the ability to determine the veracity of information one encounters, and the tendency to overclaim what one believes to be true. By discovering some of the mechanisms that affect the spread of misinformation, one may be able to avoid contributing to the rapid circulation of fake news, and instead, endorse more reliable information (Zmigrod et al., 2019).

Intellectual Humility

Previous studies have investigated individual differences in IH and its defining features. IH is defined as the degree of acceptance that one's beliefs or opinions may be incorrect (Leary et al., 2017). People who are more intellectually humble tend to be more open to new ideas, engage in more flexible thinking, and are less stubborn overall (Koetke, Schumann, Porter, & Smilo-Morgan, 2022; Spiegel, 2012; Zmigrod et al., 2019). Although IH and intelligence are only moderately related, greater IH is highly associated with more general factual knowledge (Porter et al., 2022; Zmigrod et al., 2019). This may be in part because individuals who are more intellectually humble are more driven to expand their understanding of various topics by exerting more effort to acquire knowledge (Koetke, Schumann, Porter, & Smilo-Morgan, 2022). Additionally, IH is associated with the need for cognition, and moderately linked with metacognition, suggesting that individuals with higher levels may engage in more meaningful or critical thinking patterns (Krumrei-Mancuso et al., 2019). Moreover, this may contribute to the ability of those who are higher in IH to make better-informed decisions (Porter et al., 2022).

The key characteristics of IH, including openness and flexibility, can contribute to how one approaches real-world issues, especially as applied to certain domains like politics or social issues. For instance, greater IH has been correlated with a greater willingness to get vaccinated against COVID-19, demonstrating a potential ability to recognize that some information about the negative effects of the vaccine is not supported by evidence (Porter et al., 2022). This may be related to greater openness to new experiences and a subsequent willingness to adopt more preventative health measures in individuals with higher IH (Koetke, Schumann, Porter, & Smilo-Morgan, 2022). Greater IH is also associated with an openness to consider discordant political information, which is important in approaching critical decisions such as deciding who to vote for (Koetke, Schumann, Porter, & Smilo-Morgan, 2022). Openness to different ideas and the capacity to evaluate information critically are increasingly important qualities to have in a society overridden with misinformation and fake news.

Intellectual Humility and Discernment of Information

The ability to fully understand the limitations of one's knowledge may protect intellectually humble people from cognitive biases in information seeking. People who are high in IH are less likely to be susceptible to false information or rely on confirmation bias when seeking out new ideas (Zmigrod et al., 2019). Research in this area has taken a closer look at how IH relates to better discernment of misinformation, specifically in the form of fake news headlines and non-existent terms (Bowes & Tasimi, 2022; Zmigrod et al, 2019). These studies have shown that having higher IH can reduce one's susceptibility to fake news and help limit the spread of misinformation (Bowes & Tasimi, 2022). A recent study by Bowes and Tasimi (2022) examined how unique features of IH were related to believing and endorsing misinformation, including fake news, conspiracy theories, and pseudoscience. The main findings showed that IH was negatively correlated with endorsing fake news and positively correlated with endorsing true news headlines. A greater ability to distinguish between true headlines and misinformation was directly related to greater IH (Bowes & Tasimi, 2022). By conducting further research on factors like IH that influence one's susceptibility to misinformation, ways to avoid making these mistakes throughout daily life may be identified.

Investigative Behaviors

As stated, some past research has linked IH to discernment between true and false information. However, it is not understood which aspects of being intellectually humble lead people to accurately discriminate between true and false information. The present study explored whether the way in which people engage in information-seeking behaviors to

COPYRIGHT 2025 BY PSI CHI, THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY (VOL. 30, NO. 2/ISSN 2325-7342)

acquire knowledge may be one reason for better accuracy. Specifically, engagement in *investigative behaviors,* activities such as fact-checking, seeking additional information, or simply further researching a topic that is presented may allow people to correctly identify what is true or false in various contexts (Koetke, Schumann, & Porter, 2022).

Researchers have examined investigative behaviors directly in relation to IH, showing that those higher in IH generally tend to engage in these types of behaviors, especially in the face of misinformation (Koetke, Schumann, & Porter, 2022; Koetke, Schumann, Porter, & Smilo-Morgan, 2022). Koetke and colleagues examined this relationship in the context of misinformation about the COVID-19 pandemic and found that when participants were presented with fake news headlines, IH was related to being more likely to engage in investigative behaviors such as fact-checking (Koetke, Schumann, & Porter, 2022). This demonstrates the relationship between IH and the likelihood of explicitly seeking out or validating facts when confronted with false information.

Koetke, Schumann, Porter, and Smilo-Morgan (2022) have also examined the relationship between IH and investigative behaviors in the domain of politics. These findings replicated those of the domain of COVID-19 and revealed that IH was related to further investigation of information, whether or not it was ideologically concordant with the participants' political beliefs (Koetke, Schumann, Porter, & Smilo-Morgan, 2022). This finding suggests an openness to opposing viewpoints, and a willingness to consider opposite political orientations in individuals with higher levels of IH. In addition, this study examined the causal relationship between IH and investigative behaviors. IH was manipulated by asking participants to reflect on their incorrect answers and recognize their personal fallibility through a questionnaire. This activity was able to successfully temporarily increase IH in participants, which then was related to a greater willingness to investigate information further (Koetke, Schumann, Porter, & Smilo-Morgan, 2022). This demonstrated that increased IH can lead people to engage in more investigative behaviors, at least in the context of controversial political headlines. Alternatively, it is possible that, due to IH's association with informed decision-making and more general knowledge (Porter et al., 2022), those with higher levels of IH can better recognize their knowledge limits, which in turn motivates them to investigate topics further. Due to the limited amount of research on this topic, it is unclear what mediates the relationship between IH and investigative behaviors, or whether the association is consistent when applied to other forms of misinformation, such as the overclaiming of knowledge.

Overclaiming of Knowledge

Previous research has established the overclaiming of knowledge as a phenomenon whereby people claim *impossible knowledge*–familiarity with things that do not exist (Paulhus et al., 2003; Paulhus & Harms, 2004). This phenomenon is surprisingly quite common. Studies have shown that many people overclaim knowledge even when they are warned against it (Paulhus et al., 2003). Overclaiming knowledge also involves discernment between true and false information, similar to the studies on fake news presented above. Certain studies have questioned whether or not overclaiming is related to how people acquire knowledge, but no studies have directly examined this in terms of investigative behaviors (Krumrei-Mancuso et al., 2019). Overclaiming is positively correlated with self-perceived expertise, or the way one views one's own proficiency in a certain subject area (Atir et al., 2015; Plohl & Musil, 2018). However, this type of "faking" behavior is not an accurate representation of one's true knowledge. The general tendency of individuals to overestimate their knowledge suggests that people are not good at knowing where their knowledge ends and ignorance begins, and research has shown that people are not accurate judges of their own performance on various skills (Dunning, 2011; Ehrlinger & Dunning, 2003). Limited research has focused on what drives people to fake their competence. People may overclaim to appear more socially desirable in terms of their intelligence, which may benefit them on job applications or aptitude tests (Bing et al., 2011). Correlations also suggest that another reason people may overclaim knowledge is that they are self-righteous, narcissistic, or hold feelings of belief superiority in comparison to others (Leary et al., 2017; Paulhus et al., 2003).

Studies examining the relationship between overclaiming and IH have found that higher IH is negatively correlated with overclaiming knowledge (Deffler et al., 2016; Krumrei-Mancuso et al., 2019). In addition, intellectual arrogance made participants more prone to overclaim their knowledge and abilities (Alfano et al., 2017). Together, these studies show that those with higher IH held more accurate views about what they know (Alfano et al., 2017; Deffler et al., 2016; Krumrei-Mancuso et al., 2019).

Overclaiming and the Dunning-Kruger Effect

Although research on the overclaiming of knowledge is limited, one related concept that is more prominent in research is the Dunning-Kruger effect (Kruger & Dunning, 1999). This effect describes the tendency of people with limited knowledge or competence in a particular domain to overestimate their knowledge of information within that domain (Kruger & Dunning,

 COPYRIGHT 2025 BY PSI CHI, THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY (VOL. 30, NO. 2/ISSN 2325-7342)

1999). Research has shown that people who have greater IH tend to be less susceptible to the Dunning-Kruger effect. For example, Leman and colleagues (2021) asked participants to predict their performance before taking an intelligence test, and those with lower IH overestimated how they performed. This tendency to overestimate their ability demonstrated a susceptibility to the Dunning-Kruger effect, which was greater among individuals with low IH (Leman et al., 2021). These results, along with those of studies that examined IH and overclaiming together, both demonstrate how higher IH tends to correlate with reduced know-it-all tendencies (Krumrei-Mancuso et al., 2019) and overall more conservative views in the assessment of one's knowledge and performance.

Two key differences exist between the Dunning-Kruger effect and overclaiming of knowledge. First, the Dunning-Kruger effect is partly due to a lack of skill or competence in the areas of information that people are assessed on so that when errors are made, their lack of competence hinders them from recognizing their errors (Kruger & Dunning, 1999). On the other hand, overclaiming of knowledge does not assume anything about one's levels of intelligence or competence. Second, the Dunning-Kruger effect is a comparison to other people, whereas overclaiming solely focuses on an individual's own claims of expertise, completely separate from others. Given these differences between the Dunning-Kruger effect and overclaiming, the present study focuses only on overclaiming because we were not interested in how subject area competence or interpersonal comparisons influenced claims of knowledge.

The Present Study

Altogether, an accumulation of past research suggests a connection between IH and information discernment. However, no research has explicitly examined how investigating knowledge further may be related to overclaiming (Krumrei-Mancuso et al., 2019). The current study aimed to fill this gap in the existing literature by looking at the connections between IH, engagement in investigative behaviors, and overclaiming.

Given the current research in the areas of our key variables, we hypothesized that certain relationships would exist in the context of this study. First, consistent with Bowes and Tasimi's (2022) previous findings that greater IH can reduce one's susceptibility to fake news and lead to more accurate discernment between true and false information, we predicted that greater IH would allow participants to demonstrate better discernment between real and non-existent items on an overclaiming questionnaire compared to individuals with lower IH scores. In terms of investigative behaviors, we predicted that individuals with greater IH would engage in more investigative tendencies overall, given the findings of Koetke and colleagues that higher IH is associated with further investigating information one encounters (Koetke, Schumann, & Porter, 2022; Koetke, Schumann, Porter, & Smilo-Morgan, 2022). Lastly, because past research has demonstrated a negative correlation between overclaiming and IH (Deffler et al., 2016; Krumrei-Mancuso et al., 2019), we predicted that participants with higher scores on the IH measure would overclaim their knowledge in fewer instances than those who demonstrated lower IH.

Method

Participants

The sample for this study was comprised of 123 undergraduate students recruited from the psychology department subject pool at a medium-sized private university in the American southeast, ranging in age from 18–22 years. Participants were excluded from the analyses if they did not proceed to the end of the survey or if they answered fewer than 75% of the questions. This resulted in one participant being excluded, leaving a sample size of 122. Missing values were excluded pairwise. The mean age among the participants was 19.02 years (SD = 0.87), and most (77%) were in their first year of college. The sample consisted of 82 women, 37 men, and 3 individuals who identified as nonbinary or preferred to self-describe their gender. Additionally, 3 participants identified as transgender. Participants' race/ethnicity and political ideology are shown in Table 1. Although participants were not financially compensated for their participation, all participants were eligible to receive course credit for completion of the online survey.

Materials and Procedure

Approval was received from the Elon University Institutional Review Board (protocol # 23-164) prior to data collection. The survey was administered in the form of a remote survey with asynchronous participation that could be completed on a computer or mobile phone. Each participant first reported their demographics including age, year in school, race, gender, ethnicity, and religious beliefs. Political ideology was assessed with a single-item measure that asked participants, "On the liberal-conservative dimension, how would you rate yourself politically?" Participants could choose from five responses: "very liberal," "moderately liberal," "moderate," "moderately conservative," or "very conservative." Participants then answered the six items on the General Intellectual Humility Scale (GIHS) and rated their familiarity with terms from the three pre-selected subscales of the Overclaiming

COPYRIGHT 2025 BY PSI CHI, THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY (VOL. 30, NO. 2/ISSN 2325-7342)

Questionnaire-150 (Social Science and Law, Life Sciences, and Historical Names and Events). While completing this measure of overclaiming, participants also answered another question following each term that assessed their willingness to investigate the term further.

General Intellectual Humility Scale

Participants completed the GIHS, which uses six items to assess one's level of IH (Leary et al., 2017). For each question, participants rate the extent to which the item is generally descriptive of them. Answer choices range from 1 (*not at all like me*) to 5 (*very much like me*). An example item from the GIHS is, "In the face of conflicting evidence, I am open to changing my opinions." Overall, higher scores on the GIHS indicate a higher openness to the idea that one's personal beliefs or opinions may be wrong.

TABLE 1

Demographic Characteristics Frequencies and Percentages

Characteristic		*N*	%
Race			
	American Indian/Alaska Native	1	0.8
	Asian	0	0.0
	Black/African American	2	1.6
	Native Hawaiian/Pacific Islander	1	0.8
	White	110	90.2
	Multi-Ethnic	5	4.1
Religion			
	Protestant	9	7.4
	Catholic	35	28.7
	Mormon	1	0.8
	Jehovah's Witness	0	0.0
	Orthodox	0	0.0
	Christian-Other	11	8.9
	Jewish	22	17.9
	Buddhist	0	0.0
	Muslim	1	0.8
	Hindu	0	0.0
	Unitarian	0	0.0
	Atheist	26	21.3
	Other	17	13.9
Political Ideology			
	Very Liberal	16	13.3
	Moderately Liberal	40	33.3
	Moderate	41	34.2
	Moderately Conservative	22	18.3
	Very Conservative	1	0.8

Cronbach's coefficient alpha was .76. The GIHS has been shown to effectively measure IH and correlates positively with related traits such as openness and perspective-taking, demonstrating strong validity (Leary et al., 2017).

Overclaiming Questionnaire-150

The overclaiming scale used in this study is a subset of items from the OCQ-150, which assesses people's tendency to overclaim in 10 different domains of knowledge (Paulhus et al., 2003). The 150-item questionnaire consists of terms that may or may not be well-known to participants, 30 of which are non-existent foils. Those who take the OCQ-150 are asked to rate their familiarity with each term. If the participants claim a degree of familiarity with any of the foil terms, it constitutes some level of overclaiming because the item does not exist. This scale has been used consistently throughout research on overclaiming and has shown not only strong construct validity but also stability in responses over time (Paulhus et al., 2003; Paulhus & Harms, 2004). For this study, only three out of 10 domains were presented to shorten the questionnaire and reduce participant burden, because they answered an additional question about investigative behaviors to accompany each term. We attempted to select three domains that seem most applicable to college students: Social Science and Law, Life Sciences, and Historical Names and Events. Examples of existent terms from these domains include, "behaviorism," "hemoglobin," and "Napoleon." Examples of nonexistent terms include "retroplex" and "consumer apparatus." Within these three domains, participants rated the extent to which they were familiar with each of the 45 terms on a scale of 0 (*not at all*) to 4 (*extremely*). Nine out of 45 total terms were nonexistent foils.

Investigative Behaviors Measure

To determine participants' willingness to engage in investigative behaviors, they were asked to report their likelihood of further investigating each term they encountered from the OCQ-150. For all 45 terms they were presented with from the OCQ-150, participants also answered the question "How likely are you to spend time learning more about this item?" This was answered on a scale of 1 (*extremely unlikely*) to 7 (*extremely likely*). The question and the answer format are adapted from Koetke and colleagues' (2022) 4-item Investigative Behaviors Measure. This scale's validity has been demonstrated by its ability to accurately reflect participants' likelihood of exploring information further and correlates with related constructs like curiosity and willingness to engage with new information. Their measure originally asked participants about their willingness to investigate fake news headlines and

 COPYRIGHT 2025 BY PSI CHI, THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY (VOL. 30, NO. 2/ISSN 2325-7342)

articles, which is not relevant to the context of the present study. We have therefore used their questions as a basis for creating an item that is applicable to investigating real and foil OCQ-150 terms.

Results

Descriptive Statistics

Indices of skewness and kurtosis showed evidence of normal distribution for IH (skewness = -0.78, kurtosis = 2.00), familiarity with real items on the Overclaiming Questionnaire (skewness = -0.70, kurtosis = 1.73), familiarity with fake items on the Overclaiming questionnaire (skewness = 0.84, kurtosis = 1.56), investigating real items on the Overclaiming Questionnaire (skewness = -0.50, kurtosis = -0.14), investigating fake items on the Overclaiming questionnaire (skewness = -0.16, kurtosis = -0.92), and political ideology (skewness = 0.03, kurtosis = -0.75).

Participants' mean scores on the IH scale revealed that overall, they reported being quite high in IH ($M = 3.98$, $SD = 0.50$). In terms of familiarity with items on the OCQ-150, participants reported being relatively unfamiliar with topics on the Overclaiming Questionnaire overall. Means and standard deviations of familiarity scores revealed that on average, participants' familiarity with real versus fake topics on the OCQ-150 differed, but averages for both remained on the lower side of the scale overall (see Table 2). The maximum familiarity with any topic was 3.20 (moderately-somewhat familiar) on a scale of 0–5, and the average score for all topics in general was only 2.21 ($SD = 0.50$). A paired-samples t test indicated that participants were significantly more familiar with real topics ($M = 2.42$, $SD = 0.56$) than with fake topics ($M = 1.42$, $SD = 0.43$) on the Overclaiming Questionnaire, $t(116) = 22.26$, $p < .001$.

In general, participants were not very open to further investigating the topics they saw on the Overclaiming Questionnaire ($M = 3.73$, $SD = 1.07$). A paired-samples t test on the investigative tendencies measure revealed that participants were slightly more likely to want to learn more about real topics ($M = 3.79$) than fake ones ($M = 3.45$), $t(118) = 6.87$, $p < .001$, but these average scores indicate that on the 7-point scale, participants tended to be only "slightly unlikely" or "neither likely nor unlikely" to spend more time learning about both real and foil terms they encountered (see Table 2).

Relationships Among IH, Familiarity, and Willingness to Investigate

Pearson correlations were calculated to investigate relationships between IH, familiarity with topics, and willingness to investigate topics (see Table 3). Results showed that IH was not significantly related to claiming familiarity with the topics, $r(116) = .12$, $p = .20$. This was true when looking at correlations with both real, $r(116) = .09$, $p = .34$, and fake topics, $r(117) = .12$, $p = .19$. However, participants higher in IH were more willing to investigate all topics, $r(118) = .20$, $p = .03$. Specifically, analyses revealed a significant relationship between IH and willingness to learn about fake topics, $r(118) = .20$, $p = .03$, and a marginal relationship between IH and wanting to learn about real topics $r(118) = .18$, $p = .05$. The magnitude of these correlations ranged from small tomedium (Gignac & Szodorai, 2016). Finally, familiarity with all topics was positively correlated with

TABLE 2

Means and Standard Deviations for Topic Familiarity and Willingness to Investigate

	M	*SD*	Range
Familiarity Real	2.42	0.56	0–4
Familiarity Fake	1.42	0.43	0–4
Familiarity All	2.21	0.50	0–4
Investigating Real	3.79	1.05	1–7
Investigating Fake	3.45	1.25	1–7
Investigating All	3.73	1.07	1–7

Note. Familiarity Real refers to participants' degree of familiarity with existing topics on the Overclaiming Questionnaire-150. Familiarity Fake refers to participants' degree of familiarity with non-existent topics on the Overclaiming Questionnaire-150. Familiarity All refers to participants' degree of familiarity with both existing and non-existent topics on the Overclaiming Questionnaire-150. Investigating Real refers to participants' willingness to further investigate existing topics on the Overclaiming Questionnaire-150. Investigating Fake refers to participants' willingness to further investigate non-existent topics on the Overclaiming Questionnaire-150. Investigating All refers to participants' willingness to further investigate both existing and non-existent topics on the Overclaiming Questionnaire-150.

TABLE 3

Correlations Between Variables and Descriptive Statistics

Variable	1	2	3	4	5	6	7	8	9	10
1. IH	-	-	-	-	-	-	-	-	-	-
2. OCQ Bias (c)	-.13	-	-	-	-	-	-	-	-	-
3. OCQ Accuracy (d)	.06	-.20*	-	-	-	-	-	-	-	-
4. Familiarity Real	.09	-.88***	.62***	-	-	-	-	-	-	-
5. Familiarity Fake	.12	-.82***	-.39***	.54***	-	-	-	-	-	-
6. Familiarity All	.12	-.996***	.18	.91***	.84***	-	-	-	-	-
7. Investigating Real	.18	-.43***	.21*	.55***	.33***	.52***	-	-	-	-
8. Investigating Fake	.20*	-.36***	.11	.44***	.32**	.44***	.90***	-	-	-
9. Investigating All	.20*	-.40***	.16	.51***	.34***	.49***	.97***	.98***	-	-
10. Political Ideology	-.03	.11	-.41***	-.33***	.06	-.18*	-.27**	-.28**	-.28**	-

Note. * $p < .05$. ** $p < .01$. *** $p \leq .001$.

willingness to investigate further, $r(116) = .49$, $p < .001$, indicating a large effect (Gignac & Szodorai, 2016).

Indices of Overclaiming

To examine overclaiming of knowledge, two indices were calculated. Overclaiming bias (c') indicates a participant's tendency to "say yes" or claim they are familiar with items on the OCQ (Goecke et al., 2020). Overclaiming accuracy (d') reflects participants' ability to distinguish between existent and nonexistent items on the OCQ (Paulhus et al., 2003). Both indices rely on a hit rate and false alarm rate, which are computed based on the proportion of correct and false familiarity ratings for existent items and foils (Goecke et al., 2020).

Pearson correlations were calculated between IH scores and overclaiming bias (c') and accuracy (d') scores. No significant relationship was found between IH and overclaiming bias (c'), $r(102) = -.13$, $p = .18$, or IH and overclaiming accuracy (d'), $r(102) = .06$, $p = .55$. Next, investigative tendencies were correlated with overclaiming scores, revealing a large negative correlation between overclaiming bias (c') and investigative tendencies, $r(102) = -.40$, $p < .001$ (Gignac & Szodorai, 2016). This shows that individuals who wanted to learn more about all topics on the Overclaiming Questionnaire were less likely to overclaim their knowledge. Participants' willingness to investigate all topics was not related to their ability to accurately discern between real and fake items on the OCQ-150 (d'), $r(102) = .16$, $p = .12$. However, participants' willingness to investigate real items was significantly related to their abilities to accurately discern between real and fake items on the OCQ-150 (d'), $r(102) = .21$, $p = .03$, indicating a medium effect size. However, no significant relationship was found between OCQ accuracy and willingness to investigate fake items, $r(102) = .11$, $p = .29$. This reveals that participants who were better able to discern between real and non-existent items on the OCQ were more willing to investigate real items they encountered than fake ones.

Political Ideology

Pearson correlations were calculated between participants' self-reported political ideology and IH, familiarity, investigative behaviors, and overclaiming indices (see Table 3). No significant correlation was found between IH and political ideology, $r(118) = -.03$, $p = .76$. However, the more conservative participants were, the less familiar they were with all topics on the OCQ-150, $r(114) = -.18$, $p = .05$, indicating a small effect size (Gignac & Szodorai, 2016). More conservative participants were also less likely to want to learn about all topics in general $r(117) = -.28$, $p = .002$, and were slightly less likely to investigate fake topics, $r(116) = -0.28$, $p = .003$, than real ones, $r(116) = -.27$, $p = .003$, indicating medium effect sizes (Gignac & Szodorai, 2016).

Participants' self-reported political ideology scores were also correlated with overclaiming bias and accuracy scores. Although no significant relationship was found between overclaiming bias (c') and political ideology, $r(101) = .11$, $p = .29$, Pearson correlations show that more conservative participants were less able to accurately discriminate between real and fake topics (d'), $r(101) = -.41$, $p < .001$, indicating a large effect size (Gignac & Szodorai, 2016).

Discussion

The results of the survey offer insights into people's tendencies to misconceive information as real even when it is not, as well as individual differences in IH and investigative behaviors. As expected, participants higher in IH were more willing than those lower in IH to investigate all topics on the OCQ, demonstrating that IH is associated with seeking out new information. Importantly, this relationship was driven by the willingness to learn more about fake topics. These results suggest that something about the fake topics may have sparked interest or doubt in participants with higher IH, leading them to want to learn more about these topics. This same pattern was not found for learning more about real topics. Based on past research on IH and investigative studies, this may suggest that individuals with higher IH can better discern between real and nonexistent topics, and are additionally more likely to fact-check topics that they suspect to be fake (Koetke, Schumann, & Porter, 2022). Although more research is needed to identify the root of this pattern, a willingness to learn more may allow individuals higher in IH to revise false beliefs by validating information they encounter, especially false or nonexistent information.

Another finding that supported our predictions was a negative relationship between overclaiming bias and investigative tendencies. In other words, individuals who were willing to learn more about all topics were less likely to say they were familiar with the topics. This finding suggests that people who wanted to learn more about the topics may have been more careful to indicate that they were familiar with the topics. Although no studies have directly examined the correlations between overclaiming of knowledge and investigative behaviors, this supports the idea from existing literature that taking additional steps to acquire new knowledge may be able to help people avoid overclaiming (Krumrei-Mancuso et al., 2019). Our results suggest that engaging in investigative behaviors is associated with a reduced tendency to claim knowledge that one does not possess.

 COPYRIGHT 2025 BY PSI CHI, THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY (VOL. 30, NO. 2/ISSN 2325-7342)

Surprisingly, IH was not significantly correlated with overclaiming in this study. This is interesting when compared to trends in past literature, which have identified lower IH as a predictor of overclaiming (Deffler et al., 2016; Krumrei-Mancuso et al., 2019). In addition, this contrasts with a recent study by Bowes and Tasimi (2022) that looked at how unique features of IH were related to believing and endorsing misinformation, including fake news, conspiracy theories, and pseudoscience. The main findings supported that IH was negatively correlated with endorsing fake news and positively correlated with endorsing true news headlines. In other words, a greater ability to distinguish between true headlines and misinformation was directly related to greater IH (Bowes & Tasimi, 2022). Our findings may differ from those of Bowes and Tasimi because we did not explicitly ask participants to distinguish between real and fake terms, considering that participants were unaware that foil terms existed on the OCQ-150. Their ratings of familiarity for both real and nonexistent items may also have been affected by their general familiarity with the subject areas of the three selected OCQ domains.

Additionally, participants demonstrated a general tendency to report on the lower end of the OCQ scale, as the average familiarity score was 1.92 on a 0–5 scale and the maximum familiarity with any topic was 3.58 (moderately-somewhat familiar). However, existing studies using similar OCQs have also shown participants' tendencies to report low familiarity on the 6-point scale (Goecke et al., 2020). Therefore, our sample aligns with trends from past literature in which participants were not very familiar with items on the scale. Our results may have been due to a genuine lack of familiarity with the topics, or perhaps participants were hesitant to confidently state that they knew about a topic when they were not informed of what the OCQ-150 was measuring. If participants had reported answers higher on the scale, we may have seen a different trend between IH and claiming familiarity with items on the questionnaire.

Interestingly, being more familiar with the topics was related to being more likely to want to learn more. Because our sample was comprised of undergraduate students, they may have been particularly curious. Moreover, familiarity with the topics may have led participants to feel a sense of fluency, leading them to believe learning about familiar topics may be easier or more accessible than learning about unfamiliar topics (Westerman et al., 2015). In terms of demographic findings, those who leaned politically conservative were less familiar with topics overall, less willing to investigate information, and less successful at identifying foil terms. Past research suggests that these results may be due to skepticism towards real information, in conjunction with a lack of desire to further investigate information one encounters (Koetke, Schumann, Porter, & Smilo-Morgan, 2022).

Finally, no significant relationship was found between IH and familiarity with real or fake topics. Although past research has shown that IH and intelligence are only moderately related, people high in IH tend to have more factual knowledge (Porter et al., 2022; Zmigrod et al., 2019). Because the overclaiming questionnaire presents factual topics (as well as fake topics), that IH is not related to familiarity with real factual topics is surprising.

Limitations and Future Directions

Because this research was done at a medium-sized liberal arts institution in the southeast, the demographics in the sample are limited. Most participants were around the same age (18 to 22 years), White (90.2%), and were all taking the same psychology course. Our sample was also skewed toward left-leaning ideologies (46.6%) compared to 34.2% with moderate beliefs and 19.1% with conservative beliefs. Participants tended to perform similarly on the OCQ-150, which may not have been the case with a larger and broader sample of ages, races, religions, and political ideations. This limitation opens up avenues for further research, including possible studies that examine how IH and overclaiming differ among elementary or high-school-aged students, as well as participants who are from older age groups. Given major events occurring in the world today, this knowledge may also apply to new studies surrounding overclaiming or discerning between real and false news headlines concerning the upcoming 2024 election, while also considering the generational differences in political beliefs. It may also be interesting to examine these trends across different cultures or within student populations at Historically Black Colleges and Universities (HBCUs). Given that the historical and cultural significance of HBCUs often leads to higher levels of engagement in social justice and civil rights activities (Allen, 1992), students at those universities may encounter or seek out more news or information in general (whether real or fake) when compared to non-HBCU students. Additionally, the tight-knit communities of HBCUs tend to be less diverse in terms of background, political affiliation, and race when compared with primarily White institutions (Allen, 1992).

Additional limitations may have arisen from the formatting of the survey questions. First, the shortened version of the OCQ-150, in which we only asked participants to rate 45 items as opposed to all 150 for the sake of length, has never previously been utilized in past research. However, many credible research studies have

COPYRIGHT 2025 BY PSI CHI, THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY (VOL. 30, NO. 2/ISSN 2325-7342)

found different ways to assess and score overclaiming with real and foil terms using OCQs that are based on the original Overclaiming Questionnaire-150, but are customized for a specific study (Atir et al., 2015; Goecke et al., 2020; Paulhus, 2003). Though the use of subscales in overclaiming research is common (Atir et al., 2015; Goecke et al., 2020; Plohl & Musil, 2018), the domains we chose to provide on the survey may not have provided a comprehensive view of each participant's overclaiming tendencies, and some participants were likely more familiar with the subject areas than others. In addition, participants may have been more familiar with topics on the OCQ-150 if we had chosen different domains. Furthermore, as the survey presented demographic questions before the questions concerning key variables, answering these identity and ideology-related questions first may have activated participants' stereotypes or alternative thinking patterns which may have impacted how they responded to measures of overclaiming, IH, or investigative tendencies. If we were to compose and administer the survey again, we would ask for demographic information at the end to account for the impact of item order. Finally, participants reported their own political ideology on a scale from "very liberal" to "very conservative." Future research should use existing measures of political preferences to further examine the interesting connections between political ideology and discerning nonexistent from existent topics, familiarity, and investigative tendencies.

Lastly, past research has also raised the concern that higher IH may not lead to increased use of investigative behaviors if the information is not personally relevant to the participants (Koetke, Schumann, & Porter, 2022). In cases such as the pandemic or political arguments, people tend to hold strong opinions that they want others to validate, or they may feel like the topic can be applied to their personal health or well-being (Koetke, Schumann, Porter, & Smilo-Morgan, 2022). If people are asked to further investigate information they do not have any personal connection to, they may not be willing to do so, regardless of their IH level. However, this approach has not been previously tested and is therefore a direction that future researchers could take to validate the connection between IH and investigative tendencies.

Overall, the results of this study have implications for discerning between true and false information, and the ability to identify fake news or false claims. Individuals who have higher IH want to learn more about topics which may make them more likely to fact-check, validate, and confirm information they encounter, as well as take extra steps to learn more about various topics. Although IH was not related to overclaiming in the present study, perhaps people higher in IH's willingness to learn more will eventually lead them to better discriminate existent from nonexistent or true from false information.

References

Allen, W. R. (1992). The color of success: African-American college student outcomes at predominantly White and historically Black public colleges and universities. *Harvard Educational Review, 62*(1), 26–44. https://doi.org/10.17763/haer.62.1.wv5627665007v701

Alfano, M., Iurino, K., Stey, P., Robinson, B., Christen, M., Yu, F., & Lapsley, D. (2017). Development and validation of a multi-dimensional measure of intellectual humility. *PLoS ONE, 12*(8), 1–28. https://doi.org/10.1371/journal.pone.0182950

Atir, S., Rosenzweig, E., & Dunning, D. (2015). When knowledge knows no bounds: Self-perceived expertise predicts claims of impossible knowledge. *Psychological Science, 26*(8), 1295–1303. https://www.jstor.org/stable/24544035

Bing, M. N., Kluemper, D., Kristl Davison, H., Taylor, S., & Novicevic, M. (2011). Overclaiming as a measure of faking. *Organizational Behavior and Human Decision Processes, 116*(1), 148–162. https://doi.org/10.1016/j.obhdp.2011.05.006

Bowes, S. M., & Tasimi, A. (2022). Clarifying the relations between intellectual humility and pseudoscience beliefs, conspiratorial ideation, and susceptibility to fake news. *Journal of Research in Personality, 98*, 104–220. https://doi.org/10.1016/j.jrp.2022.104220

Burel, G., Farrell, T., & Alani, H. (2021). Demographics and topics impact on the co-spread of COVID-19 misinformation and fact-checks on Twitter. *Information Processing & Management, 58*(6), 1–23. https://doi.org/10.1016/j.ipm.2021.102732

Deffler, S. A., Leary, M. R., & Hoyle, R. H. (2016). Knowing what you know: Intellectual humility and judgments of recognition memory. *Personality and Individual Differences, 96*, 255–259. https://doi.org/10.1016/j.paid.2016.03.016

Dunning, D. (2011). The Dunning-Kruger Effect: On being ignorant of one's own ignorance. In J. M. Olson, & M. P. Zanna (Eds.), *Advances in experimental social psychology* (vol. 44, pp. 247–296. Academic Press. https://doi.org/10.1016/B978-0-12-385522-0.00005-6

Ehrlinger, J., & Dunning, D. (2003). How chronic self-views influence (and potentially mislead) estimates of performance. *Journal of Personality and Social Psychology, 84*(1), 5–17. https://doi.org/10.1037/0022-3514.84.1.5

Gignac, G. E., & Szodorai, E. T. (2016). Effect size guidelines for individual differences researchers. *Personality and Individual Differences, 102*, 74–78. https://doi.org/10.1016/j.paid.2016.06.069

Goecke, B., Weiss, S., Steger, D., Schroeders, U., & Wilhelm, O. (2020). Testing competing claims about overclaiming. *Intelligence, 81*, Article 101470. https://doi.org/10.1016/j.intell.2020.101470

Koetke, J., Schumann, K., & Porter, T. (2022). Intellectual humility predicts scrutiny of COVID-19 misinformation. *Social Psychological and Personality Science, 13*(1), 277–284. https://doi.org/10.1177/1948550620988242

Koetke, J., Schumann, K., Porter, T., & Smilo-Morgan, I. (2022). Fallibility salience increases intellectual humility: Implications for people's willingness to investigate political misinformation. *Personality and Social Psychology Bulletin, 49*(5), 806–820. https://doi.org/10.1177/01461672221080979

Kruger, J,. & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology, 77*(6), 1121–1134. https://doi.org/10.1037/0022-3514.77.6.1121

Krumrei-Mancuso, E. J., Haggard, M. C., LaBouff, J. P., & Rowatt, W. C. (2019). Links between intellectual humility and acquiring knowledge. *The Journal of Positive Psychology, 15*(2), 155–170. https://doi.org/10.1080/17439760.2019.1579359

Leary, M. R., Diebels, K. J., Davisson, E. K., Jongman-Sereno, K. P., Isherwood, J. C., Raimi, K. T., Deffler, S. A., & Hoyle, R. H. (2017). Cognitive and interpersonal features of intellectual humility. *Personality & Social Psychology Bulletin, 43*(6), 793–813. https://doi.org/10.1177/0146167217697695

Leman, J., Kurinec, C., & Rowatt, W. (2021). Overconfident and unaware: Intellectual humility and the calibration of metacognition. *The Journal of Positive Psychology, 18*(1), 178–196. https://doi.org/10.1080/17439760.2021.1975155

Paulhus, D. L., & Harms, P. D. (2004). Measuring cognitive ability with the overclaiming technique. *Intelligence, 32*(3), 297–314. https://doi.org/10.1016/j.intell.2004.02.001

Paulhus, D. L., Harms, P. D., Bruce, M. N., & Lysy, D. C. (2003). The over-claiming

 COPYRIGHT 2025 BY PSI CHI, THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY (VOL. 30, NO. 2/ISSN 2325-7342)

technique: Measuring self-enhancement independent of ability. *Journal of Personality and Social Psychology, 84*(4), 890–904. https://doi.org/10.1037/0022-3514.84.4.890

Plohl, N., & Musil, B. (2018). Do I know as much as I think I do? The Dunning-Kruger Effect, overclaiming, and the illusion of knowledge. *Psihološka Obzorja / Horizons of Psychology*, 20–30. https://doi.org/10.20419/2018.27.481

Porter, T., Elnakouri, A., Meyers, E. A., Shibayama, T., Jayawickreme, E., & Grossmann, I. (2022). Predictors and consequences of intellectual humility. *Nature Reviews Psychology, 1*(9), 524–536. https://doi.org/10.1038/s44159-022-00081-9

Skafle, I., Nordahl-Hansen, A., Quintana, D. S., Wynn, R., & Gabarron, E. (2022). Misinformation about COVID-19 vaccines on social media: Rapid review. *Journal of medical Internet research, 24*(8), 1–29. https://doi.org/10.2196/37367

Spiegel, J. S. (2012). Open-mindedness and intellectual humility. *Theory and Research in Education, 10*(1), 27–38. https://doi.org/10.1177/1477878512437472

Westerman, D. L., Lanska, M., & Olds, J. M. (2015). The effect of processing fluency on impressions of familiarity and liking. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 41*(2), 426–438. https://doi.org/10.1037/a0038356

Yen, H., Seitz, A., & Swenson, A. (2020, December 3). *AP fact check: Trump's claims of vote rigging are all wrong*. Associated Press. https://apnews.com/article/election-2020-ap-fact-check-joe-biden-donald-trump-technology-49a24edd6d10888dbad61689c24b05a5

Zmigrod, L., Zmigrod, S., Rentfrow, P. J., & Robbins, T. W. (2019). The psychological roots of intellectual humility: The role of intelligence and cognitive flexibility. *Personality and Individual Differences, 141*, 200–208. https://doi.org/10.1016/j.paid.2019.01.016

Author Note

Emma E. Simpson https://orcid.org/0009-0002-9225-6478

Katrina P. Jongman-Sereno https://orcid.org/0000-0002-5710-4148

Emma E. Simpson is now a Candidate for the MA in Forensic Psychology at The George Washington University.

Materials for this study can be accessed at https://osf.io/f2ytz/. We have no conflicts of interest to disclose. This study was supported by the Elon University Elon College Fellows Program.

Correspondence concerning this article should be addressed to Emma E. Simpson at 4 Holcomb Hill Rd, West Granby, CT, 06090. Email: esimpson6@elon.edu

COPYRIGHT 2025 BY PSI CHI, THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY (VOL. 30, NO. 2/ISSN 2325-7342)

ADVERTISEMENT

Educating psychologists since 1969

For over 50 years, we have been preparing the next generation of mental health professionals.

Founded as the first freestanding school of psychology, our California School of Professional Psychology (CSPP) enjoys APA, CACREP, and COAMFTE accreditations, and provides students small cohorts, exceptional support, a wide network of alumni in the field, and a curriculum rooted in a history of notable faculty including Abraham Maslow, Viktor Frankl, Igor Ansoff, Jay Haley, and many others.

Let our legacy help you build yours.
Clinical Psychology priority application deadline is November 15.
Get started at alliant.edu

Our programs

- Clinical Psychology (PhD and PsyD)
- Clinical Psychopharmacology (MS)*
- Clinical Counseling (MA)
- Marital & Family Therapy (MA and PhD)
- Industrial & Organizational Psychology (PhD)*
- Organizational Psychology (MA)*
- Social Work (MSW)*

**online programs only*

Our locations

Fresno
Irvine
Los Angeles
Sacramento
San Diego
San Francisco Bay Area
Online

Alliant International University
California School of Professional Psychology

©2025, Alliant International University. All rights reserved. CSPP-2458

 COPYRIGHT 2025 BY PSI CHI, THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY (VOL. 30, NO. 2/ISSN 2325-7342)

ADVERTISEMENT

Psi Chi Video Academy

Learn From the Pros

To inspire equal-opportunity learning experiences Psi Chi recordings are are available free to nonmembers!

Members and nonmembers are invited to explore Psi Chi's Monthly Webinars, Distinguished Lecturer sessions, and special Chapter Chats—all at no charge.

Visit https://www.psichi.org/learningresources

PSI CHI THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY

ADVERTISEMENT

ONLY AT THE PSI CHI STORE

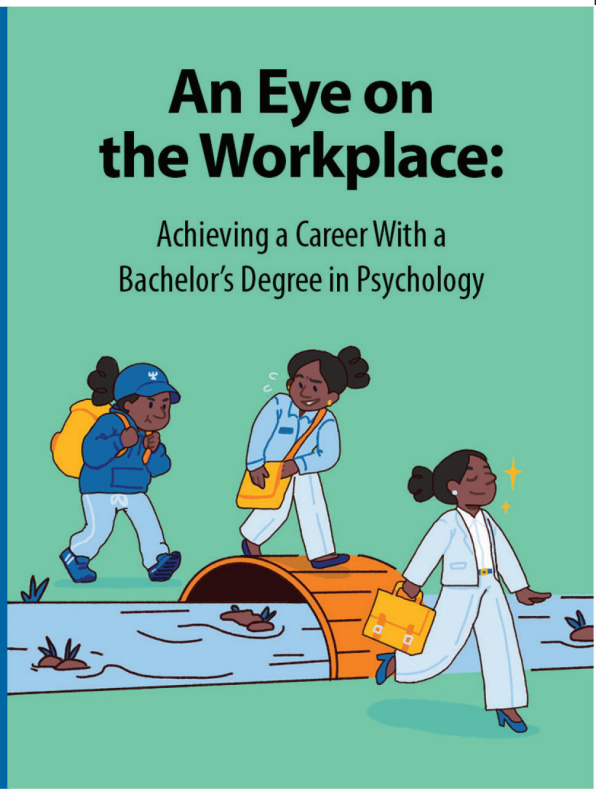
30 Articles From Psychology Career Experts on College to Career Transition

Let Psi Chi's latest digital anthology guide your transition from college to career!

Psi Chi Members: Remember to log-in before purchasing to get $15 off!

DOWNLOAD TODAY

Store.PsiChi.org



COPYRIGHT 2025 BY PSI CHI, THE INTERNATIONAL HONOR SOCIETY IN PSYCHOLOGY (VOL. 30, NO. 2/ISSN 2325-7342)

Publish Your Research in *Psi Chi Journal*

Undergraduate, graduate, and faculty submissions are welcome year round. Only one author (either first author or coauthor) is required to be a Psi Chi member. All submissions are free. Reasons to submit include

- a unique, doctoral-level, peer-review process
- indexing in PsycINFO, EBSCO, Web of Science's Emerging Sources Citation Index, and Crossref databases
- free access of all articles at psichi.org
- our efficient online submissions portal

View Submission Guidelines and submit your research at *https://www.psichi.org/?page=JN_Submissions*

Become a Journal Reviewer

Doctoral-level faculty in psychology and related fields who are passionate about educating others on conducting and reporting quality empirical research are invited become reviewers for *Psi Chi Journal*. Our editorial team is uniquely dedicated to mentorship and promoting professional development of our authors—Please join us!

To become a reviewer, visit *https://www.psichi.org/page/JN_BecomeAReviewer*

Resources for Student Research

Looking for solid examples of student manuscripts and educational editorials about conducting psychological research? Download as many free articles to share in your classrooms as you would like.

Search past issues, or articles by subject area or author at *https://www.psichi.org/journal_past*

Learn About Psi Chi

Psi Chi is the International Honor Society in Psychology. Membership is primarily open to undergraduates, graduate students, transfer students, full-time and part-time faculty members, and alumni.

See membership benefits and a link to apply at *https://www.psichi.org/page/member_benefits*

Register an account:
https://pcj.msubmit.net/cgi-bin/main.plex

PSI CHI