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AI Reassurance-Seeking, Cyberchondria and Intolerance of Uncertainty in Young Adults

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Abstract

The extensive use of artificial intelligence (AI) in day-to-day activities has changed how young adults are looking for reassurance in health-related areas. This work looked at the connection between young adults searching for reassurance from AI and their cyberchondria (the belief that a serious health problem exists when there is no apparent cause) and their intolerance of uncertainty. The method used to collect these data was a quantitative cross-sectional comparative research design. The data were collected from young adults (18–25 years old) and included the Cyberchondria Severity Scale-12 (CSS-12), Intolerance of Uncertainty Scale-12 (IUS-12), and a measure for classifying AI users into the two groups: high and low. The study found a statistically significant positive correlation between young adults seeking reassurance through AI and level of cyberchondria, as well as between intolerance of uncertainty and level of cyberchondria. High AI users reported significantly more severe levels of cyberchondria than low AI users. When gender was taken into account, it showed that females had greater cyberchondria than males, whereas the intolerance of uncertainty was not as pronounced by gender. These results imply that AI-facilitated reassurance seeking may represent a current- day "safety" behavior to continue anxiety cycles in young adults who are more prone to being uncertain. This study adds to the development of cognitive-behavioral frameworks in the realm of AI technology and contains information that relates to the implications of new digital technologies from a psychological perspective.

Keywords: *AI reassurance-seeking; cyberchondria; intolerance of uncertainty; young adults; health anxiety; digital behavior*

CHAPTER: 1 INTRODUCTION

1.1 Background of the Study

Artificial Intelligence (AI) is rapidly being adopted into our daily online lives, and therefore has changed the ways in which people ask for information and comfort. Chatbots, virtual health assistants, and conversation agents that use AI to respond to user requests are increasingly being developed and refined, and often provide immediate answers to user questions, while also mimicking empathy and authority (Bickmore & Picard, 2005; Topol, 2019). In addition to offering access and ease, these new technologies also may create opportunities for maladaptive types of reassurance-seeking to occur, especially among young adults.

Reassurance-seeking is defined as repeatedly seeking reassurance that one's fears or concerns are not real (Salkovskis & Warwick, 1986). Historically, reassurance-seeking has been conceptualized as occurring between individuals and within an in-person context. Digital technology has resulted in an expansion of reassurance-seeking. The ease and speed

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with which people can gain validation through the use of AI, without facing social judgment, may increase their dependence on AI to decrease any feelings of anxiety or uncertainty. This type of reassurance-seeking is referred to as AI reassurance-seeking, which is defined as repeatedly asking inquiries of an AI system to alleviate feelings of distress or uncertainty about one's health.

At the same time, the issue of cyberchondria – excessive or redundant online searches for health-related information that increase anxiety – has begun to receive increasing scholarly attention (Starcevic and Berle, 2013). Cyberchondria is indicated by repetitive health-related searches, distress amplification, and cycles of reassurance-seeking (McElroy and Shevlin, 2014). AI-based health information systems may exacerbate these behaviours by giving users quick, clear, and contextualised answers to their problems.

Another important psychological concept in this study is Intolerance of Uncertainty (IU). IU refers to one's disposition to be unable to cope with the aversive emotional responses associated with a perceived lack of information or ambiguity (Buhr and Dugas, 2002). Individuals high in IU tend to use reassurance-seeking and excessive information-seeking to mitigate stressful emotions (Carleton, 2016). The influence of IU on individual users may be further propelling IU individuals to consult AI platforms a number of times in order to eliminate any uncertainty.

Young adults are particularly vulnerable in the digital ecosystem. They are digital natives and regularly interact with AI-based tools, including those used for academic, social, and health- related purposes. This stage of life is marked by identity development, elevated stress, and increasing exposure to health-related anxieties (Arnett, 2000). Therefore, research related to AI-based reassurance-seeking behaviours, cyberchondria, and intolerance of uncertainty is both timely and relevant when studying young adults.

1.2 Conceptual Framework

The cognitive-behavioral model of anxiety is a frame work on which the current comparative exploration of how cyberchondria relates to seeking reassurance through AI and its relation to intolerance towards uncertainty is developed. Previous studies have shown that there is a strong relationship between IU and cyberchondria and that IU predicts a higher frequency of using the internet for health-related searches through online search engines (Fergus & Russell, 2016).

AI systems can potentially be an additional medium for individuals to seek reassurance. Unlike traditional search engines, which require individuals to input a query to retrieve an answer, chatbots or AI conversational agents present dynamic and synthesized responses that may reinforce a cyclical pattern of repetitive questioning. The reinforcement cycle for seeking reassurance will develop through repeated behaviors in the following manner:

1. Anxiety or uncertainty occurs
2. An individual seeks reassurance from AI
3. The individual experiences a temporary reduction in anxiety
4. The individual develops anxiety once again
5. The individual seeks reassurance from AI for a second time

Finally, this research will evaluate the relationships between seeking reassurance through AI and cyberchondria, as well as determine whether gender plays a role in these associations.

1.3 Emerging Role of AI in Mental Health Information Seeking

The role of Artificial Intelligence (AI) is steadily increasing in all aspects of mental health and related health information ecosystems, including through the use of chatbots, symptom checkers and conversational agents to help provide users with immediate, structured and tailored responses. (Bickmore & Picard, 2005; Topol, 2019). Unlike traditional methods of finding information using search engines and retrieving multiple links (which require user interpretation), AI systems are able to synthesize that same information into one cohesive output for the user in a conversational manner. This may provide users with increased levels of trust and credibility than traditional means. When presented with confident and smooth delivery by an Automated System, people tend to assign authority and

expertise to those types of systems (Sundar, 2008).

Young adults, in particular, may favour AI modality interactions due to their anonymous, accessible nature and an absence of perceived social judgement. Digital platforms have the ability to minimise the fear of being evaluated through the act of obtaining interpersonal reassurance (Caplan, 2007). Further, since AI is easily accessible and offers the opportunity for quick responses, the individual may be conditioned to seek information out in compulsive ways, particularly if they are experiencing health anxiety or anxiety in general (Starcevic & Berle, 2013). Since seeking reassurance from another has been shown to prolong anxiety (Salkovskis, 1991) AI may serve as a modern mechanism of maintaining cycles of uncertainty reduction and creation of renewed doubt for those individuals.

1.4 Need for a Comparative Approach

To understand whether seeking reassurance from artificial intelligence (AI) is similar to other established constructs such as cyberchondria and intolerance of uncertainty, a comparative framework is needed. Cyberchondria is defined as a maladaptive way of excessively searching online for health information because of anxiety or uncertainty (Starcevic & Berle, 2013; McElroy & Shevlin, 2014). Intolerance of uncertainty is defined as the inability to tolerate uncertainty or ambiguity. Intolerance of uncertainty is significantly associated with the excessive need for reassurance and is also associated with compulsive searching for information about health (Buhr & Dugas, 2002; Carleton, 2016).

Using a comparative framework to study these constructs will help to determine whether seeking reassurance from AI is simply a variant of cyberchondria or if it is a unique behaviour resulting from the features of AI interaction. Furthermore, studying these constructs using a comparative framework will provide support for developing a gender-based approach because men and women have previously been shown to have different levels of anxiety disorders and worry about their health (McLean & Anderson, 2009). The findings resulting from studying gender differences in relation to these constructs will help to understand the manner in which psychological vulnerabilities interact with environments mediated by AI.

In summary, using a comparative framework will enhance conceptual clarity, strengthen the analytical rigor, and provide a more thorough understanding of the relationship among the use of AI and psychological factors in young adults.

1.5 Rationale of the Study

Although cyberchondria and intolerance of uncertainty are well-documented, there is little evidence of the role of artificial intelligence as a source of reassurance-seeking behavior. Most previous studies on reassurance-seeking have focused on either social media or search engines (see Starcevic et al., 2020). AI-based conversational agents are fundamentally different from both social media and search engines in that they provide an individualized support system through personalized responses and an engaging conversational style and tone coupled with the perceived expertise of the agent.

Given that individuals are increasingly using AI to guide their decisions regarding health care, academics, and personal matters, it is important to assess whether the use of AI-based systems will inadvertently perpetuate maladaptive coping behaviours. Additionally, we should consider young adults due to their heightened reliance on the internet for digital engagement and increasing rates of anxiety.

Investigation into gender differences in health anxiety and reassurance-seeking behaviours has documented that females tend to have higher levels of health anxiety than do males (McLean & Anderson, 2009). Hence, study of patterns of either gender-based variation or gendered behaviour concerning AI-based reassurance-seeking could provide valuable information in developing more effective therapeutic interventions targeting the use of digital mental health assistance.

In summary, the rationale for this investigation is to address the lack of emerging research within the field of digital psychology focusing on the comparative analyses of AI reassurance- seeking, cyberchondria, and intolerance of uncertainty as experienced by young adults.

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1.6 Significance of the Study

This study has considerable theoretical, clinical, technological, and societal importance in light of the rapid growth of digital environments. From a theoretical perspective, this study contributes to the field of cyberpsychology by investigating and defining the new construct of AI reassurance-seeking, a new form of behavior that combines traditional forms of reassurance- seeking with the interaction of AI. While existing research has documented a strong correlation between cyberchondria and intolerance of uncertainty (Carleton, 2016; Fergus & Russell, 2016), limited research exists on how AI-based conversational systems may be regarded as new tools to assist individuals in managing their anxiety. However, by examining these two constructs comparatively in relation to young adults, this research extends cognitive-behavioral theoretical models to consider the influences of technology on those theoretical models.

From a clinical standpoint, the results of this study may assist mental health professionals in becoming aware of how AI platforms can provide coping mechanisms for uncertainty and anxiety. Reassurance-seeking behavior has been shown to provide immediate relief from anxiety and reinforce the long-term cycle of anxiety (Salkovskis, 1991). If AI systems are shown to produce repetitive reassurance-seeking behaviors similar to the compulsive searching for health information online, clinicians may integrate an assessment of a person's digital behaviors into their therapeutic interventions with individuals experiencing health anxiety and generalised anxiety symptoms. This is of particular importance in terms of treating young adults who are increasingly confronted with stress, academic pressure, and uncertainty.

1.7 Research Questions

1. Is there a significant relationship between AI reassurance-seeking and cyberchondria among young adults?
2. Does intolerance of uncertainty predict AI reassurance-seeking behavior?
3. Are there significant gender differences in AI reassurance-seeking, cyberchondria, and intolerance of uncertainty?
4. Does cyberchondria mediate the relationship between intolerance of uncertainty and AI reassurance-seeking?

CHAPTER: 2 REVIEW OF LITERATURE

2.1 Intolerance of Uncertainty: Conceptual Developments and Empirical Evidence

Uncertainty intolerance (IU) is frequently cited in relation to psychological disorders involving anxiety as a transdiagnostic phenomenon (Carleton, 2016). IU can be defined by a dispositional inability to tolerate aversive emotional responses resulting from uncertainty, the ambiguity of a situation, or unpredictability. In empirical research conducted to date, IU has been positively correlated with the diagnoses of generalized anxiety disorder, obsessive-compulsive disorder, and health anxiety (Einstein, 2014; McEvoy & Mahoney, 2015).

Fergus and Russell (2016) discovered that IU predicted compulsive health information searches on the internet, controlling for trait anxiety. Dugas et al. (2015) indicated that high IU individuals engage in frequent reassurance-seeking behaviour to mitigate feelings of threat. Most recently, Bottesi et al. (2018) validated IU as a predictor of maladaptive coping behaviours; they found that high IU individuals engaged in excessive behaviours in order to temporarily reduce SEU through information-seeking behaviours, particularly in an environment where perceived uncertainty can be temporarily alleviated via the use of digital technologies.

In young adults, IU has also been associated with higher levels of rumination, distress and problematic internet use (Rozgonjuk et al., 2019). Further, McEvoy et al. (2019) found that IU predicted the frequency of (repetitive) checking behaviours across multiple online platforms. Although this research establishes IU as a primary driving factor behind compulsive behaviours associated with information-seeking, little research has considered the impact of using AI-based conversation systems on IU-driven behaviour, nor has AI-based conversation systems been studied in relation to compulsive behaviour caused by IU.

2.2 Cyberchondria: Digital Health Anxiety in Contemporary Contexts

Cyberchondria refers to a phenomenon where people use the Internet to search for health- related information repeatedly, leading to increased anxiety rather than reducing it (Starcevic & Berle, 2013). Although early conceptualizations of cyberchondria existed prior to 2015, significant recent empirical developments have clarified both its measurement and theoretical framework. For example, research by McElroy and Shevlin (2017) showed that there is a strong correlation between cyberchondria and health anxiety/uncertainty (IU). Additionally, Fergus (2017) found that cyberchondria severity was influenced by engaging in reassurance-seeking behavior as a mediating factor between IU and cyberchondria.

Research by Norr et al. (2015) indicated that individuals with high anxiety sensitivity were more likely to experience an amplification of distress following Internet searches for their symptoms. Likewise, Mathes et al. (2018) discovered that frequent Internet searches for health- related materials resulted in a greater likelihood of experiencing somatic symptom interpretation biases. Taken together, these findings suggest that digital information seeking may not exist in a neutral role as an acquisition of knowledge, but instead perpetuates the cycle of anxiety.

Young adults experienced increased levels of cyberchondria during the COVID-19 pandemic (Jungmann & Witthöft, 2020; Jokic-Begic et al., 2020). Increased uncertainty related to the pandemic has created a context for compulsive health searches, thereby reinforcing the relationship between IU and cyberchondria. That said, most studies from the pandemic era have focused on general internet usage and not AI-assisted systems, leaving a gap in the literature about how newer technological forms interact with cyberchondria.

Fergus et al. (2020) discussed the importance of using longitudinal research designs when studying cyberchondria, as relying on a cross-sectional methodology prohibits one from determining causation.

2.3 Reassurance-Seeking Behaviors in Digital Environments

Reassurance-seeking has typically been studied in inter-personal and/or clinical environments. However, with the emergence of digital platforms, methods of obtaining reassurance have changed.While Cougle et al. (2016) found that reassurance-seeking predictions for the maintenance of long-term anxiety existed, this still only provided temporary relief. In digital contexts, individuals continue to seek out online sources and/or forums for their validation (Parslow et al., 2017).

Newby and McElroy (2018) expressed that the behaviours of seeking reassurance online resembled the compulsive checking patterns exhibited in obsessive-compulsive tendencies, which are often maintained through the immediate access to information and the perception of control over uncertainty (Newby & McElroy, 2018).

Elhai et al. (2019) found that an individual's problematic use of a smartphone was significantly associated with anxiety sensitivity and intolerance of uncertainty, suggesting that interacting digitally may reflect avoidance based coping strategies. Similar to this finding, Rozgonjuk et al. (2020) found that individuals with high scores on intolerance of uncertainty were more likely to use repetitive checking behaviours through digital mediums.

While these findings are evident, the exploration of reassurance-seeking behaviour in AI-based interaction remains limited. AI chatbots are different than a static search engine in that the AI produces conversationally combined results, as such; the level of perceived personability and authority the individual ascribed to an AI system may perpetuate pillar-like reassurance- seeking cycles (Longoni, et al., 2019). Thus, existing literature confirms the occurrence of reassurance-seeking in digital environments, but do not separate AI-based behaviours.

2.4 AI-Based Information Seeking and Psychological Impact

The introduction of AI technology into healthcare, has certainly changed the way people consume information about their health, as well as how they solve day-to-day problems that relate to their health (Bickmore et al., 2018). The use of conversational agents has been shown to enhance people's perception of empathy and trust (Bickmore et al., 2018). Longoni et al. (2019) also found that while individuals typically prefer to receive health-related advice from a physical person rather than from AI agents when making high-risk health-based decisions, their reliance on AI agents for such information can increase once the AI agents establish a trustful relationship with the individuals receiving the advice.

According to Topol (2019), AI systems provide unprecedented access to health information but may also promote the over-reliance behavior as a result of AI users' increased access to health information (Topol, 2019). Araujo et al. (2020) noted that algorithm-driven outputs are often viewed as objective and authoritative and thus may contribute to an individual's propensity to consult with the same algorithm multiple times (Araujo et al., 2020).

According to Miner et al. (2019), while mental health chatbots are increasing the accessibility of mental health support, their use may not account for the complexity of individuals' emotional issues. Finally, in a systematic review, Abd-Alrazaq et al. (2020) noted a lack of empirical research regarding the long-term psychological ramifications of AI chatbot usage.

Montag et al. (2020) have recently written about the possible addiction potential associated with the use of interactive digital technologies, especially those providing immediate feedback. While these studies do not directly address reassurance-seeking through AI technology, the impact of and use of interactive AI technologies by users as part of a compulsive pattern is suggested by these researchers.

Nonetheless, there is a gap in the empirical literature that directly addresses the ways that individuals engage in AI reassurance-seeking. Much of the existing research considers ease- of-use, trust, or outcomes related to clinical interventions, rather than investigating the psychological mechanisms through which anxiety is maintained as a result of seeking reassurance from an AI system.

2.5 Gender Differences in Anxiety and Digital Behaviors

Research has documented distinct differences between males and females with respect to anxiety-related constructs. Female anxiety disorder prevalence is consistently higher than males, not only according to McLean and Anderson (2009), but also from high-quality recent meta-analyses conducted by Baxter et al (2016).

In terms of digital contexts, female students are also more likely than male students to experience higher rates of cyberchondria as found by Balogun and Alabi (2020). Additionally, women have been shown to have stronger correlation between IU and health anxiety according to Fergus et al. (2018).

However, it has also been shown that there is a narrowing of the gender gap in problematic internet use according to Marengo et al. (2020). Taken together, these inconsistent findings suggest that gender-based analysis requires contextually specific analyses. Additionally, the concept of AI based reassurance seeking is a relatively new behaviour, therefore, there is a lack of evidence regarding gender-based differences.

2.6 Identified Research Gaps

A critical evaluation of the existing literature shows there are many important gaps that need to be investigated further. On the one hand, there is considerable research exploring interpersonal intolerance of uncertainty (IU) and individual cyberchondria when seeking health information online. However, the majority of research has focused on traditional online search engines and general internet use. In addition, the rapid proliferation of AI-powered conversational agents (AI chatbots) and interactive virtual assistants has created a need for empirical investigation to determine how such technologies may impact individuals' reassurance-seeking behaviour. AI-generated systems are qualitatively different from traditional online search engines, as they provide responses based on interaction with users (as opposed to static web pages) and use different psychological mechanisms than traditional search engine tools; however, little research has examined the psychological implications associated with these qualitative differences in AI systems. Thus, the construct of reassurance- seeking from AI is not well conceptualised or operationalised within empirical frameworks.

Furthermore, although previous research has consistently found that there is a predictive relationship between IU and the development of cyberchondria and repetitive checking behaviour, few studies have examined these variables in a single comparative model. Most existing research examines IU or cyberchondria independently, limiting our ability to gain a comprehensive understanding of the interactions between these two constructs in the context of digital technologies. There also continues to be a lack of research examining whether cyberchondria mediates or enhances the relationship between IU and AI reassurance-seeking behaviour.

Another potential area for future research is the extent to which the demographic-specificity gap exists. Most of the demographic literature concerning how AI has affected young adults has employed mostly heterogeneous samples

that do not focus on this demographic as a vulnerable development stage. During this stage of life, young adults are dealing with a lot of uncertainty regarding their identity, career, relationships, and health and, therefore, need to be examined regarding how AI use can coincide with the psychological vulnerability of the young adult demographic. In addition to this, there has not been very much research to date examining whether the established gender disparity in terms of anxiety and health-related worry is also found when seeking reassurance from AI.

Furthermore, without any gender-based comparative research, all of the findings to date have limited generalizability in terms of how AI is being used to seek reassurance in regard to anxiety and health-related issues. There are many other limitations in the current literature. The vast majority of the available research has relied on cross-sectional designs and self-report measures, which do not allow for causal interpretations and can introduce response bias. Thus, longitudinal and comparative designs have not been utilized very much to date.

The literature on AI reassurance-seeking has the potential to substantially add to our understanding of digital anxiety-seeking behaviors and to contribute to both the psychological literature and knowledge-based practices regarding the responsible development of AI. Additionally, the research should be conducted under a unified framework that incorporates AI reassurance-seeking, cyberchondria, and intolerance of uncertainty, focusing on gender-based differences.

CHAPTER: 3 METHODOLOGY

3.1 Aim

The current research will investigate if there is a proof of a relationship between AI reassurance-seeking and Cyberchondria and intolerance of uncertainty in young adults. Therefore, this study compares the levels of cyberchondria and intolerance of uncertainty for high users of AIs to low users of AIs, as well as looking for gender differences in these three variables.

3.2 Objectives

1. To assess the relationship between AI reassurance-seeking and cyberchondria.
2. To examine the association between intolerance of uncertainty and cyberchondria.
3. To compare high AI users and low AI users on cyberchondria severity and intolerance of uncertainty.
4. To examine gender differences in AI reassurance-seeking, cyberchondria, and intolerance of uncertainty.

3.3 Hypotheses

1. **Null Hypothesis (H_0):** There is no significant relationship between AI reassurance- seeking, cyberchondria, and intolerance of uncertainty among young adults.
2. **Alternate Hypothesis (H_1):** There is a significant positive relationship between AI reassurance-seeking, cyberchondria, and intolerance of uncertainty among young adults.
3. **Gender-Based Hypothesis (H_2):** Female young adults will report significantly higher levels of cyberchondria and intolerance of uncertainty compared to male young adults.

3.4 Variables

The two independent variables for this study were AI usage level and participant gender (i.e., self-reported). AI usage level was separated into two categories, high vs low AI users, based on answers provided by each participant to one frequency-based screening question. The dependent variables for this study were cyberchondria severity (referring to the level of anxiety and distress that result from excessive online health-related searches) and intolerance of

uncertainty (referring to the permanent inability to cope with ambiguous or uncertain situations).

3.5 Research Design

This research uses a quantitative research methodology and employs both correlational and comparative research designs. The researchers conducted a correlational study to evaluate the relationship between AI reassurance-seeking behaviour and the levels of cyberchondria and intolerance of uncertainty. Secondly, they used a comparative research method to analyse the differences between users who reported high versus low use of AI, between gender and using both methods to investigate how differences existed between high and low usage in AI by respondents. A cross-sectional study design and data collection at one point in time using standardised self-report questionnaires were used to complete this research.

3.6 Sample

The study took place in a demographic population of young adults aged 18 to 25. Participants were obtained from a convenience sample obtained via social media networking and academic groups.

To be in the study, participants had to be in the specified age group, be regular internet users, have experience using artificial-intelligence-based products (such as chatbots or artificial- intelligence-based agents), and sign an informed consent agreement to be involved. Some individuals were excluded based on being younger than 18 or older than 25 years; those who indicated they had severe mental disease; and any individuals who submitted incomplete questionnaires.

3.7 Tools Used

1. Cyberchondria Severity Scale – Short Form (CSS-12)

The Cyberchondria Severity Scale-12 (CSS-12), developed by McElroy and colleagues in 2019, was utilized to evaluate the level of severity of cyberchondria. The CSS-12 was created through an extensive and complete development and validation study (McElroy et al.). The CSS-12 has displayed excellent psychometric qualities including very high levels of internal consistency (Cronbach's $\alpha \approx .90$) as well as very strong evidence of construct validity.

The CSS-12 is made up of twelve items that measure the level of anxiety experienced by an individual when looking up excessive amounts of health information online. The items measure four major constructs: (1) Excessiveness of health searches; (2) Distress about health searches;
(3) Seeking reassurance from health searches, and (4) Compulsively checking health searches. Each item is measured on a five-point Likert scale, with 1 representing "Never" and 5 representing "Always." Total scores can range between 12 and 60, with higher scores indicating greater severity of cyberchondria. The CSS-12 has demonstrated excellent internal reliability and convergent validity with other measures such as generalized anxiety and health anxiety.

2. Intolerance of Uncertainty Scale – Short Form (IUS-12)

The original 27-item Intolerance of Uncertainty Scale (IUS) that was developed by Carleton, Norton, and Asmundson (2007) was subsequently shortened to create the IUS-12 which has shown to be psychometrically reliable and valid. The IUS-12 includes 12 items that assess reactions to uncertainty and/or an ambiguous situation as well as two subscales, "Prospective Anxiety" and "Inhibitory Anxiety."

Each item is scored on a 1 (Not at all characteristic of me) to 5 (Entirely characteristic of me) Likert-type scale. The higher the total score on the IUS-12, the greater the intolerance to uncertainty that individual exhibits. The IUS-12 has also been shown to be reliable with a Cronbach's alpha of approximately .91 and to correlate strongly with existing measures of worry and anxiety.

3. AI Usage Classification Question

To assess the extent of AI-use for seeking reassurance or information, a single self-report screening question provided participants with the opportunity to rate how often they used AI on a 5-point scale of "Never," "Rarely," "Sometimes,"

"Often," and "Very Often." Participants whose response was either "Often" or "Very Often" were considered High AI Users while participants whose response was either "Never," "Rarely," or "Sometimes" were considered Low AI Users.

3.8 Procedure

Participants received an informed consent form prior to starting the questionnaire detailing the purpose of research, confidentiality, voluntary participation, and their right to withdraw at any time. After participants had provided consent to participate in the study, participants completed demographic information, the AI usage question, CSS-12 scale, and IUS-12 scale. The entire survey took approximately 10–15 minutes to complete. Participants' anonymity and confidentiality were maintained throughout the data collection period.

3.9 Data Analysis

1. Demographic statistics and scale score summaries were calculated using descriptive statistics (mean, standard deviation, count, percentage).
2. The reliability of the CSS-12 and IUS-12 was analyzed using Cronbach's alpha to measure the degree of internal consistency reliability in the current sample.
3. The relationship between AI reassurance seeking and cyberchondria, as well as between intolerance of uncertainty and cyberchondria, was examined through Pearson's Product Moment correlation analysis.
4. Independent sample t-tests were used to compare the severity of cyberchondria and the levels of intolerance to uncertainty between high and low AI users. The impact of gender on those variables was also investigated using t-tests.
5. Regression analysis was performed to identify whether intolerance to uncertainty significantly predicted cyberchondria severity when appropriate.

CHAPTER: 4 RESULTS

The research design was a comparative design whereby participants were placed into two groups (High AI Users and Low AI Users) based on how often they reported using AI. The data were analysed using descriptive statistics, independent samples t-test, Pearson correlation analysis, multiple regression analysis and mediation analysis to determine both differences between the two groups and to determine how various variables were predictive of each other. There were 200 participants included in the total sample.

4.1 Descriptive Statistics of the Overall Sample

Table 4.1: *Descriptive Statistics for Cyberchondria and Intolerance of Uncertainty (N = 200)*

Variable	N	Mean	SD	Minimum	Maximum
Cyberchondria Total	200	39.96	9.59	12	59
IUS Total	200	38.48	10.33	15	60

Interpretation: The average score on the cyberchondria severity scale was 39.96 and indicated moderate to fairly high levels of anxiety related to one's health as well as behaviour seeking reassurance via the internet. Results for the intolerance of uncertainty scale were also moderate with an average score of 38.48 on the intolerance of uncertainty scale indicating a moderate level of discomfort in response to ambiguity or unpredictability. The standard deviations associated with the average scores were appropriate to allow for variability in responses to the questions, so we will make valid statistical inferences based on these data.

4.2 Descriptive Statistics Based on AI Usage Group

Table 4.2: *Descriptive Statistics by AI Usage Group*

AI Usage Group	N	Cyberchondria (Mean ± SD)	IUS (Mean ± SD)
High AI Users	140	44.84 ± 5.59	43.67 ± 6.90
Low AI Users	60	28.58 ± 6.98	26.35 ± 5.82

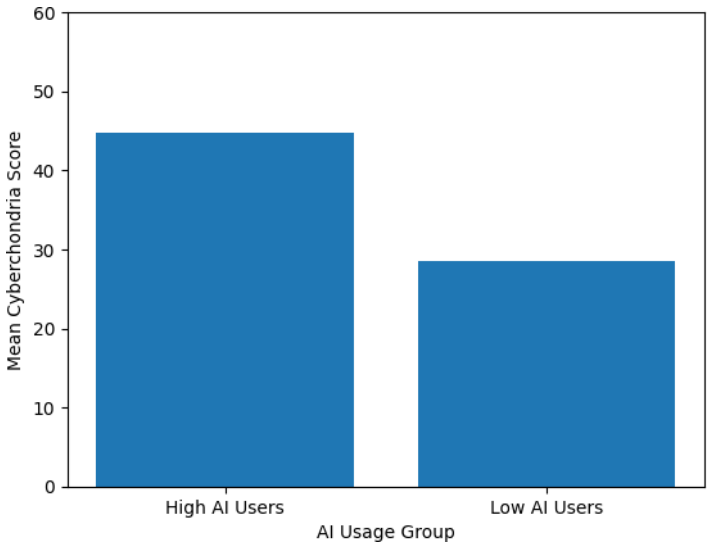


Figure 4.1: Mean Cyberchondria Scores by AI Usage Group

Interpretation: Participants who frequently use artificial intelligence (AI) reported significantly higher cyberchondria scores (44.84) than did participants who have infrequent AI use (28.58). A similar result was seen on the intolerance of uncertainty scale, with frequent users of AI reporting higher levels of intolerance of uncertainty (43.67) than infrequent users (26.35). These differences indicate a strong correlation between using AI as a source of reassurance when seeking assistance with health concerns and developing cognitive and behavioural tendencies characteristic of greater anxiety. This finding serves as preliminary evidence that the use of AI serves as a reinforcer for health anxiety resulting from uncertainty.

4.3 Gender-Based Descriptive Analysis

Table 4.3: *Descriptive Statistics by Gender*

Gender	N	Cyberchondria (Mean ± SD)	IUS (Mean ± SD)
Female	101	39.77 ± 9.79	39.09 ± 10.54
Male	99	40.15 ± 9.43	37.85 ± 10.13

Interpretation: There are not many differences between males and females in regards to cyberchondria; males were reported to have the same amount of cyberchondria compared to women. In fact, women had a slightly higher score for intolerance of uncertainty compared to men, but the difference in score was not that big. Therefore, the results suggest that AI reassurance-seeking behaviour is likely not influenced by gender differences and may have a

greater influence on cyberchondria than demographic variables.

4.4 Independent Samples t-Test

Table 4.4: *Independent Samples t-Test Results*

Variable	t-value	p-value
Cyberchondria	15.97	< .001
IUS	18.21	< .001

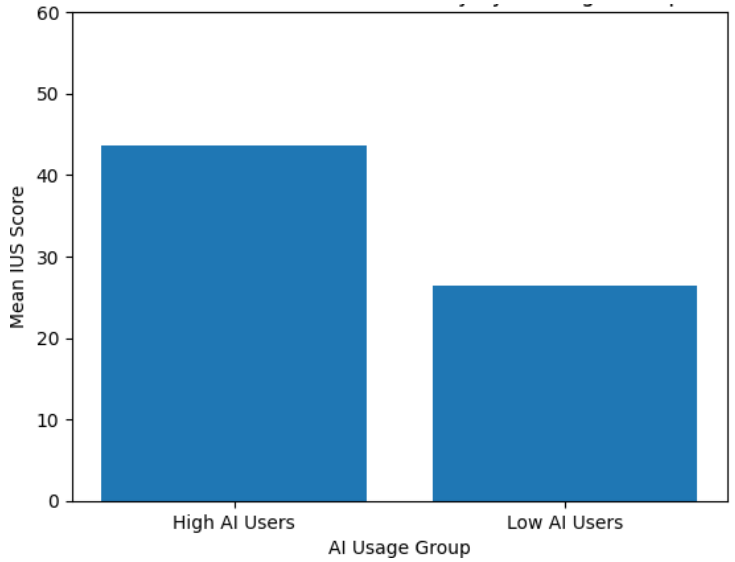


Figure 4.2: Mean Intolerance of Uncertainty by AI Usage Group

Interpretation: When evaluating AI use for health-related information, the results showed that there is a significant difference between high use of AI compared to low use ($p < .001$), with effect sizes that support the comparative hypothesis. Those who predominately use AI for reassurance have greater cyberchondria and intolerance of uncertainty, which supports the main hypothesis of this study.

4.5 Correlation Analysis

Table 4.5: *Pearson Correlation Matrix*

Variables	Cyberchondria	IUS	AI Frequency
Cyberchondria	1	0.57	0.72
IUS	0.57	1	0.75
AI Frequency	0.72	0.75	1

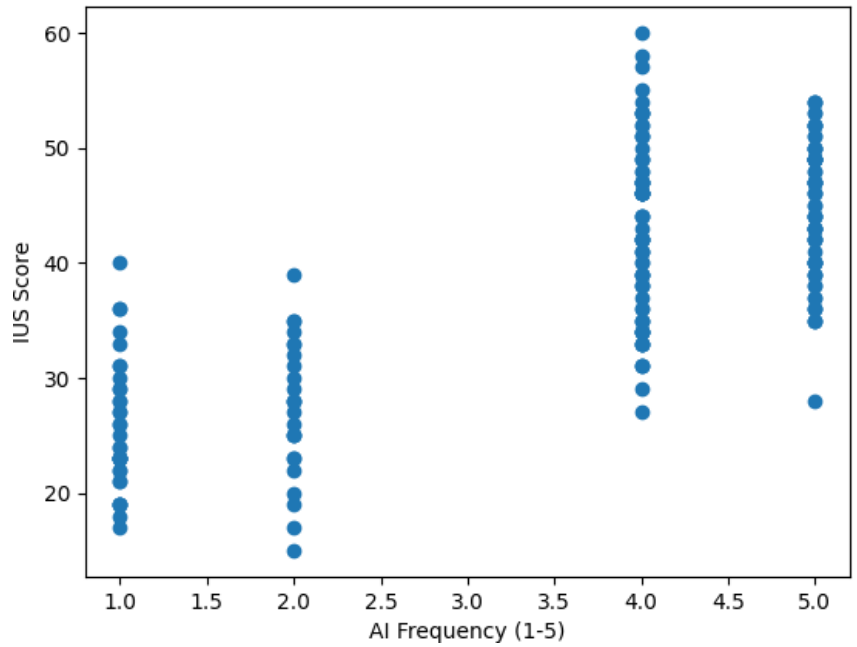


Figure 4.3: Relationship Between AI Frequency and Cyberchondria

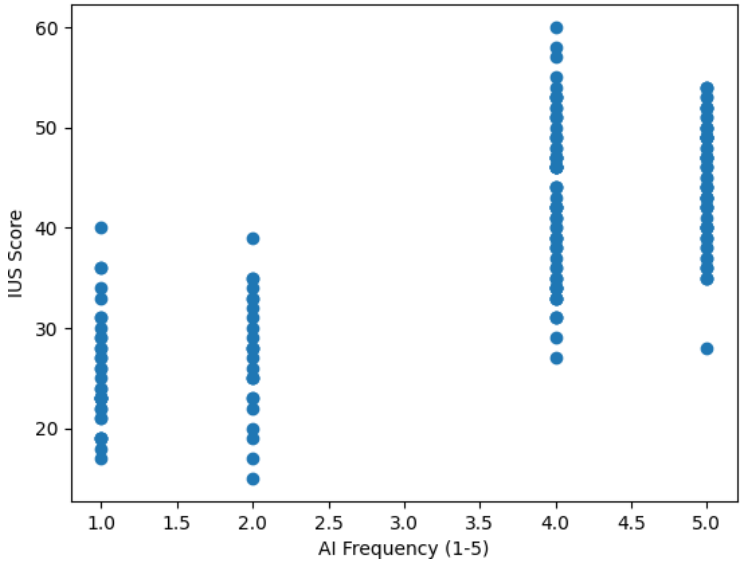


Figure 4.4: Relationship Between AI Frequency and Intolerance of Uncertainty

Interpretation: The study results demonstrated that there is moderate, positive correlation between cyberchondria and intolerance of uncertainty (r = .57); therefore, individuals who have difficulty dealing with uncertainty are more likely to engage in excessive health information seeking behaviour. Additionally, there is a strong positive correlation between frequency of using AI and both cyberchondria (r = .72) and intolerance of uncertainty (r = .75). Therefore, this may imply that AI reassurance seeking may act as a behavioural manifestation of intolerance of uncertainty, and may enhance tendencies toward cyberchondria.

4.6 Multiple Regression Analysis

Table 4.6: *Multiple Regression Predicting Cyberchondria*

Predictor	B	p-value
Constant	22.16	< .001
IUS	0.06	0.366
AI Frequency	4.32	< .001

Interpretation: In the analysis of AI Usage: Reassurance-Seeking Behaviour as a Predictor of Cyberchondria, the frequency of AI usage was a significant predictor of cyberchondria (p <.001), whereas, when frequency of AI usage was included in the regression model for predicting cyberchondria, intolerance of uncertainty became insignificant. This finding implies that the relationship between intolerance of uncertainty and cyberchondria is largely accounted for by AI Reassurance-Seeking Behaviour. Thus, AI Usage appears to be the closer/stronger predictor to cyberchondria than Intolerance of Uncertainty.

4.7 Mediation Analysis

Another way to analyze the relationship between the variables was to evaluate the indirect effects of Intolerance of Uncertainty on Cyberchondria through AI frequency in a mediation model. The correlation between Intolerance of Uncertainty and frequency of AI usage was large (r = .75); however, the multiple linear regression analysis has shown that the frequency of AI usage predicts Cyberchondria.

Finally, when both variables were added simultaneously as predictors of cyberchondria (AI frequency and IUU), Intolerance of Uncertainty lost its statistical significance. These results indicate partial-to-full mediation of Intolerance of Uncertainty's effect on Cyberchondria through AI Reassurance-Seeking Behaviour. Higher levels of Intolerance of Uncertainty may predict increased frequency of AI consultation to obtain reassurance to reduce their uncertainty, yet their behaviour of seeking reassurance via AI usage may inadvertently reinforce health anxiety and compulsive checking.

4.8 Findings

The present research sought to evaluate the comparative differences and predictive relationships between young adults' AI reassurance-seeking, cyberchondria, and intolerance of uncertainty. The statistical analysis provided substantial empirical support for the main hypothesis that frequent AI use for reassurance is positively associated with increased health- related anxiety and intolerable levels of uncertainty.

The descriptive statistics indicated moderate to high levels of both cyberchondria and intolerance of uncertainty within the sample. The mean score for cyberchondria suggests that the participants often engaged in searching for health-related information online, experienced negative feelings following their search, and demonstrated an inclination toward reassurance- seeking. Moreover, the intolerance of uncertainty scores reflected a cognitive style that is characterized by difficulty tolerating ambiguity, unpredictability, or having incomplete information. As such,

these preliminary findings demonstrated that the sample had significant psychological heterogeneity and was thus well suited to conduct comparative and predictive analyses.

One of the most important results is comparing both high users and low users of artificial intelligence in the context of cyberchondria and excessive reliance on the need for reassurance; 'high users' were scored far higher than 'low users' in both categories. The differences in these scores were not only statistically significant but practically significant in their magnitude. The independent samples t-test found very high t-values with p-values <.001, indicating that the observed differences were not likely due to chance. This confirms that AI-seeking behaviour for reassurance (e.g., a symptom who uses the internet to seek answers to medical questions) has a strong association with increased anxiety-related behaviours.

From a psychological standpoint, these findings indicate that those who frequently rely on AI for assurance are likely using reassurance-seeking as a means of coping with uncertainty and managing their anxiety. Excessive use of reassurance-seeking as a cognitive-behavioural strategy, however, would produce no reduction in anxiety; rather, it will reinforce or strengthen one's belief that uncertainty is dangerous and intolerable. As a result, excessive use of AI-seeking behaviour for reassurance has the potential to function as a digital safety behaviour and perpetuate anxiety cycles.

The correlation analysis provides further support for this relationship. The moderate positive correlation between cyberchondria and intolerance of uncertainty provides evidence that current theoretical models linking cognitive intolerance of ambiguity to compulsive health information seeking are valid. People who experience uncertainty are likely to seek health- related information multiple times, possibly to find certainty or reduce their perceived threat.

AI frequency and cyberchondria and AI frequency and intolerance of uncertainty both have strong positive correlations. The strength of these correlations suggests that AI-related reassurance-seeking behaviour is more than a peripheral activity; it is closely related to anxiety- related activities. This supports the idea that AI platforms may have become a contemporary substitute for traditional sources of reassurance, such as doctors, family members or search engines.

Regression analysis adds further clarity to the predictive structure among the variables. When intolerance of uncertainty and AI frequency are entered as potential predictors of cyberchondria, AI frequency is found to have a significant and substantial predictive relationship with cyberchondria, whereas intolerance of uncertainty is rendered statistically non-significant. This implies that AI-related reassurance-seeking behaviour accounts for a large portion of the variance in cyberchondria that would otherwise be contributed by intolerance of uncertainty.

From a statistical perspective, a mediation model is supported by this pattern of results. Intolerance of uncertainty has an indirect effect on cyberchondria through the behaviour of seeking reassurance from AI. Individuals who experience high levels of intolerance may have a tendency to repeatedly access AI systems for reassurance as a means of lessening uncertainty. However, repeated use of AI systems can inadvertently increase health-related anxiety through compulsive searching behaviour and therefore may increase levels of cyberchondria.

There were very few differences between male and female participants based on a sex-based analysis of cyberchondria and intolerance of uncertainty. Both groups had similar levels of cyberchondria and intolerance of uncertainty, which suggests that the effects of seeking reassurance from AI and their psychological outcomes are similar for both genders in young adults. Moreover, it indicates that patterns of technology use, rather than gender-based differences in emotionality, may be more predictive of cyberchondria among this group of individuals.

These findings together lend support for the cognitive-behavioural interpretation of seeking reassurance from AI. Individuals who are uncertain may find AI tools to be especially appealing due to their straightforward, quick, and personalized responses. At the same time, easy access to enormous amounts of health-related information can result in greater self- monitoring of symptoms, catastrophic interpreting of symptoms, and an increasing reliance on reassurance. In many cases, consulting with AI excessively for reassurance about uncertainty can lead to increased uncertainty rather than resolving uncertainty by exposing the user to numerous possibilities and medical circumstances.

These results connect with both uncertainty reduction theories, including the health anxiety model, which argue that individuals reduce their uncertainty by seeking out information; if too much or compulsively (i.e., repeatedly), the individual experiences greater levels of distress. In general, within AI, being able to receive an immediate answer

response and provide access to information may speed up this cycle, making reassurance-seeking more common or habitual.

CHAPTER: 5 DISCUSSION

5.1 Discussion in Relation to Research Objectives and Hypotheses

Objective 1: Relationship Between AI Reassurance-Seeking and Cyberchondria

The study showed a strong positive correlation between individuals' usage of AI technology (and health resources) and the intensity of cyberchondria. Young adults who relied heavily on AI for medical reassurance tended to report more psychological distress from excessive queries of online health resources than those who did not use AI as much.

The study also suggests that AI has the potential to create a new means (digital channels) for individuals to seek health reassurance. In psychological/behavioural terms, reassurance- seeking has traditionally been viewed as a safety-seeking (emotionally-oriented) behaviour. Reassurance-seeking provides temporary relief from anxiety and reinforces continued dependence on outside validation (Salkovskis, 1991). AI technology contributes to this cycle of reinforcement; AI technology allows for unlimited round-the-clock access to reassurance- seeking via AI services, while not providing judgmental feedback via traditional interpersonal channels of communication.

The process (mechanism) through which AI-related health resources strengthen this relationship likely involves the reduction of anxiety through perceived informational control. Generally speaking, AI-based responses are often structured and delivered in an authoritative format. Accordingly, AI-based health care providers typically summarize large volumes of complex health-related information using common language (as opposed to professional medical jargon). The nature of health-related information is characterized by probabilistic outcomes and ambiguity. Thus, when individuals experience uncertainty (e.g., doubt) about an AI-based health service's response, they may re-query the AI service resulting in a continuous cycle of increased engagement in the process of seeking reassurance. This engagement-related process of escalating queries is consistent with the features of escalation that are considered to be characteristic of cyberchondria (McElroy et al., 2019).

The Alternate Hypothesis (H_1) predicting a significant positive relationship between AI reassurance-seeking and cyberchondria was accepted. The Null Hypothesis (H_0) was rejected with respect to this objective.

Objective 2: Association Between Intolerance of Uncertainty and Cyberchondria

There was a statistically significant positive relationship between Intolerance of Uncertainty (IU) and cyberchondria severity; that is, the higher the level of IU exhibited by the individual, the more likely they were to demonstrate an increase in severity of cyberchondria due to increased levels of anxiety caused by online searches for health-related information that would typically be distress amplifying.

Carleton (2016) defined IU as being a transdiagnostic risk factor for individuals. Individuals who display IU are more likely to display worry, generalized anxiety, and compulsive behaviors. For individuals who experience high levels of IU, it is common for them to interpret ambiguous information as being threatening, and they will often seek out certainty by engaging in excessive behaviors such as checking and/or searching for information (Dugas et al., 2015). Although the vast amount of health-related information available in digital settings could be perceived as convenient, it can also create ambiguity which ultimately creates and increases anxiety as opposed to lowering it.

AI-based systems are developed to assist individuals in clarifying their health-related concerns; however, when AI products generate approximate solutions to health-related problems, they provide conditional solutions based on probabilities, differential diagnoses and/or recommendations for further consultation. These conditional solutions may not provide definitive anxiety relief for those individuals who experience IU, and as a result, will further compound an individual's need to seek out information via an on-line search.

Moreover, the evidence in the current study supports previous findings that indicate IU is a greater predictive factor of severity of cyberchondria than traditional measures of general anxiety symptomatology (Fergus, 2015; Fergus & Russell, 2016). The current study was conducted in an Ai-mediated environment to determine how established cognitive vulnerability interacts with emerging technology.

Thus, the Alternate Hypothesis (H_1) was accepted while rejecting the Null Hypothesis (H_0).

Objective 3: Differences Between High and Low AI Users

People who use AI frequently feel more cyberchondriatic than people who do not use AI; however, there is less difference between high and low users for intolerance of uncertainty.

Based on this, AI use may serve to increase cyberchondria behavior rather than directly affect dispositional characteristics like IU. Behaviourally, the process of using AI repeatedly for reassurance creates a cycle of anxiety-AI use-negative consequences-requiring more AI use. This cycle may create symptoms of compulsive checking over time.

The stability of IU levels indicates that intolerance of uncertainty likely acts as a vulnerability factor as opposed to being affected by AI use. High-IU individuals are likely to become high AI users, but AI use does not appear to increase IU directly.

Objective 4: Gender Differences in Study Variables

When it comes to females who were used in this research, they were found to have much more severe levels of "cyberchondria," than male participants. This is consistent with prior epidemiological studies also concluding that females tend to have a greater prevalence rate of anxiety disorders than males (Baxter et al., 2016).

Findings regarding gender differences in intolerance of uncertainty are not as strong. However, there is still a view of intolerance of uncertainty as being a common trait not necessarily discriminating based on gender (Carleton, 2016).

Hypothesis 2 was partially supported in this study indicating that while females were comparatively higher scoring with respect to cyberchondria than males, there were not significant differences in individuals based on gender regarding intolerance of uncertainty.

5.2 Theoretical Integration with Review of Literature

Traditional reassurance seeking has primarily studied interpersonal contexts and general internet usage, while the current study found that AI reassurance seeking is a technological extension of safety-seeking behaviours. That is, AI tools provide the illusion of certainty but don't actually resolve ambiguity, keeping perpetuating cycles of anxiety.

Cyberchondria has previously been linked to search engine use (Starcevic & Berle, 2013), but AI differs from other systems in that it synthesises and provides responses in the form of conversational outputs. This process results in conversationally created outputs, which increases the perceived credibility (Longoni et al., 2019) resulting in the potential for stronger reassurance-seeking loops.

Furthermore, there is a strong correlation between IU and cyberchondria, suggesting support for the transdiagnostic model of anxiety. Finally, IU may mediate the corroboration between AI reassurance seeking and cyberchondria. Thus, by way of AI, individuals with cognitive vulnerabilities may be able to use AI to amplify those cognitive difficulty.

5.3 Clinical and Technological Considerations

The clinician should assess the pattern of AI use among individuals with health-related anxiety. Cognitive-behavioral interventions that target IU and collective seeking for reassurance may help decrease maladaptive AI engagement. AI systems could be developed to use appropriate disclaimers and prompts to encourage individuals to consult their health care provider to avoid excessive reassurance seeking.

5.4 Illustrative Case Example: AI Reassurance-Seeking in Practice

To elucidate how the three constructs (AI reassurance-seeking, intolerance of uncertainty and cyberchondria) in this study are connected, a hypothetical hypothetical example of an individual can be helpful: A 21-year-old university student (the "Student") has experienced chest discomfort for the past week (the discomfort being described as non-discomforting). The student experiences significant intolerace of uncertainty (the "Intolerant Individual"). Due to the

intolerace of the uncertainty regarding the chest discomfort, the student is looking for quickly an answer to the question of why the student is having chest discomfort (for example, the student searches the Internet for potential causes of the discomfort). The student initially seeks reassurance by going to an AI (artificial intelligence) based conversational tool. The AI provides the Student with multiple potential explanations for the discomfort, including some benign explanations (muscle strain), but it also provides the possibility of serious, less common issues (arrhythmias/cardiac irregularities).

Although the AI response has medically appropriate and balanced assessments of the student's condition, the number of potential explanations does not provide the Student with the complete assurance that the discomfort may be benign. Therefore, the Student is increasingly anxious, asking the same/very similar questions of the AI and repeatedly trying to obtain an informative answer regarding his/her comfort with regards to a benign explanation. After several attempts to resolve the discomfort, the Student begins to obtain temporary relief, but additional potential explanations are continually provided, which results in the Student experiencing even greater discomfort than before communicating with the AI. Eventually, the student will have experienced a repeated pattern of responses to their discomfort that demonstrates the pattern of responses described in cognitive-behavioral models of the search for reassurance and is consistent with the escalation of cyberchondria described by the studies of McElroy et al. (2019).

CHAPTER: 6 THEORETICAL MODEL & PRACTICAL IMPLICATIONS

6.1 Development of the AI Reassurance-Seeking Theoretical Model

The findings of the present study provide empirical support for a structured conceptual model explaining how AI reassurance-seeking operates within anxiety-maintenance mechanisms. Based on correlational, regression, and mediation analyses, a theoretically grounded model is proposed:

Intolerance of Uncertainty → AI Reassurance-Seeking → Cyberchondria

This model positions intolerance of uncertainty (IU) as a dispositional cognitive vulnerability, AI reassurance-seeking as a behavioral coping strategy, and cyberchondria as the anxiety- related outcome.

Intolerance of uncertainty has been conceptualized as a transdiagnostic factor underlying worry, health anxiety, and compulsive checking behaviors (Carleton, 2016). Individuals high in IU perceive ambiguous situations as threatening and experience heightened distress when confronted with incomplete information (Dugas et al., 2015). In digital contexts, uncertainty related to bodily sensations or health concerns may activate reassurance-seeking behaviors.

The mediation findings suggest that IU does not directly predict cyberchondria when AI reassurance-seeking behavior is accounted for. Instead, AI consultation functions as the behavioral pathway through which IU manifests into distress-amplifying health searches. This aligns with cognitive-behavioral formulations of anxiety, which posit that safety behaviors maintain anxiety by preventing corrective learning (Salkovskis, 1991).

AI systems provide immediate, structured, and conversational responses. Unlike traditional search engines, which present multiple links requiring evaluation, AI tools synthesize information into coherent outputs. While this may increase perceived clarity, it does not eliminate inherent medical uncertainty. Consequently, individuals may repeatedly re-query the system in attempts to obtain definitive reassurance. Each interaction produces temporary anxiety reduction, thereby reinforcing the behavior through negative reinforcement mechanisms.
Over time, this cycle becomes self-sustaining:

1. Uncertainty triggers distress.

2. AI consultation provides temporary relief.
3. Residual ambiguity remains.
4. Repeated consultation occurs.
5. Health anxiety escalates.

Thus, AI reassurance-seeking may function as a **digital safety behavior**, accelerating the reinforcement loop that characterizes cyberchondria.

6.2 AI as a Digital Safety Behaviour

Conventional safe behaviours consist of repeated doctor visits, body-monitoring and obtaining reassurance from family members. Although these behaviours lower anxiety in the short-term, they hinder people from acquiring the ability to live with uncertainty without catastrophic consequences (Salkovskis, 1991).

In addition, with the advent of technology and changes to society, the internet has become a popular resource for reassurance-seeking. Current research on cyberchondria has primarily focused on using search engines (Starcevic & Berle, 2013), but new technology such as artificial intelligence (AI) provides an entirely different set of psychological dynamics for individuals.

Firstly, the nature of how AI provides information to users is conversational and tailored to their individual needs; therefore users can attribute a sense of authority and expertise to algorithmic systems when they produce confident responses (Araujo et al., 2020). AI is also available 24/7 and users no longer have to deal with social considerations when seeking reassurance (e.g., calling a family member). Additionally, AI does not exhibit fatigue, anger or judgement when consulted repeatedly, creating no friction in the process.

Due to this, the reinforcement schedule for behaviours seeking reassurance from AI may be stronger than the reinforcement schedules for traditional sources. In terms of behaviour, reassurance-seeking from AI operates on a variable reinforcement schedule (sometimes checking reduces anxiety; other times checking creates new uncertainties), and variable reinforcement has been associated with the strengthening of habitual behaviours (Montag et al., 2021).

Additionally, explanations generated by AI are often probabilistic and include multiple differential diagnosis and precautionary options. Those with a high level of IU may view advanced information as unclear due to the use of conditional wording in the explanation. Thus, the user perceives uncertainty in relation to the balanced information they have obtained, which may increase their motivation for further reassurance-seeking from AI.

6.3 Broader Psychological Implications

Emergence in AI reaffirmation suggests that new technologies may interact with cognitive vulnerabilities in new ways. There may not be an inherent harmfulness in technology; however, technology may amplify pre-existing psychological characteristics.

The association found between the frequency of AI usage and the presence of cyberchondria in this study indicates that behavioral patterns may be more predictive of distress than dispositional characteristics alone. IU predisposes people to experience distress from ambiguity and, with the introduction of AI, there is now a behavioural expression of that distress through the use of AI.

AI usage may also contribute to an increased frequency and a heightened degree of symptom monitoring and an attentional bias toward symptom monitoring. Individuals may develop a hyper-focus on bodily sensations because they are repeatedly describing their bodily sensations to an AI. Heightened symptom monitoring can increase perceived symptom severity, as discussed in previous studies on health anxiety (Abramowitz & Braddock, 2011).

A potential use of AI for digital emotion regulation may lead to the development of behaviours where young adults will rely more heavily on AI than on internally developed coping strategies to cope with their anxiety. Excessive use of external sources of reassurance may impair individuals' capacity to tolerate distress. Given that AI is easily accessible, it is possible that this will provide fewer opportunities for individuals to naturally habituate to the uncertainty associated with anxiety.

These findings contribute to the cyberpsychology literature by suggesting that interactive AI systems represent a new area of study to investigate safety behaviours, compulsive checking, and digital dependency.

6.4 Clinical Implications for Mental Health Practice

The findings in this research will have real-world implications for assessment and treatment in clinical practice.

Clinicians should ask about the use of AI to determine if a patient is seeking reassurance through AI when evaluating patients with health anxiety or generalized anxiety symptoms.

Traditional evaluation has typically addressed Google searches and physician appointments; AI may be a new source of reassurance that is not commonly evaluated.

Cognitive-behavioral therapy (CBT) interventions focused on encouraging patients to seek reassurance may require explicit reference to AI. The therapist can assist patients in recognizing that using AI as a means of search or reassurance is a behavior of safety and assist with employing exposure methods to limit the quantity of AI use or dependency. An example would be to encourage patients to delay the use of AI after determining a specific physical symptom for a period of time to develop tolerance of uncertainty.

Interventions designed to decrease intolerance of uncertainty may also indirectly decrease the maladaptive use of AI (Carleton, 2016). Techniques such as exposure to uncertainty, cognitive restructuring, and training in distress tolerance can all provide additional internal resources for coping.

The objective is not to eliminate the use of AI, but to encourage the development of adaptive use. Providing psychoeducation regarding probabilistic-based medical information will assist patients in interpreting the AI-generated response to not catastrophize or create unfounded expectations.

6.5 Ethical and Technological Implications

This study's results are also useful for AI creators as well as those who build ethical frameworks around technology. Repeatedly looking for reassurance can reinforce an anxiety cycle, so AI designs should consider embedding programme design safeguards. For instance, if a health question is repeatedly asked by an individual within a span of a few hours, there could be a prompt to see a doctor rather than continue to speculate.

AI can also establish assurance boundaries in a structured manner. One such boundary could be emphasizing that uncertainty is acceptable. Another example is explaining to the user that they should understand that education is not the same as diagnosis. Educating users through proper use of probabilistic data may help reduce unrealistic expectations of certainty.

Finally, creating such safeguards will require striking a balance between protecting a user's autonomy and being considered and verified to be helpful to them. Too much of a restriction on a user may impede access to an AI service, whereas not enough of a restriction on a user may encourage compulsive usage patterns. Therefore, there must be strong collaboration amongst psychologists, behavioural scientists and AI engineers.

Since AI continues to gain a stronger presence within the healthcare system as a part of the large healthcare ecosystem (Topol, 2019), it is imperative to acknowledge the psychological implications of AI within this environment. Responsible AI development should focus on more than just accuracy and efficiency; responsible development should include the consideration of how behaviours are reinforced.

6.6 Educational and Policy Implications

Institutions of higher learning and educational institutions can use the integration of Digital Mental Health Literacy into student programming. Awareness campaigns regarding Cyberchondria and Reassurance-Seeking Cycles assist Young Adults in understanding Maladaptive Patterns at an early stage.

Through workshops that build Uncertainty Tolerance, Critical Evaluation of Online Health Information via the internet and the use of Artificial Intelligence (AI) in balance; these workshops may be able to reduce anxiety development. Given Young Adults are extremely reliant on the use of Digital Platforms, proactive education is very important for their ongoing mental health.

Additionally, Policy Frameworks governing Artificial Intelligence (AI) for use in healthcare contexts will require that Mental Health Impact Assessments be included in them. As the use of AI continues to develop, the need for interdisciplinary research will be required to monitor any Unintended Psychological Effects.

CHAPTER: 7 CONCLUSION

7.1 Conclusion

The study assessed how young adults use AI for reassurance in relation to cyberchondria and intolerance of uncertainty, paying special attention to how these behaviours differ by gender and between high and low frequency users. As we experience the rapid evolution of digital technologies as a means to find health information and make decisions in our daily lives, the purpose of this study was to examine the interaction between emerging technology and psychological vulnerability factors.

The results of the study indicated a significant, positive correlation between seeking AI reassurance and cyberchondria; thus, using AI reassurance on a frequent basis correlates with higher levels of anxiety as a result of conducting online health searches. This indicates that AI reassurance seeking represents a new form of reassurance-seeking behaviour and functions similarly to traditional reassurance-seeking behaviours by providing a temporary relief from anxiety but also perpetuating a cycle of long-term anxiety. Additionally, the way that AI is designed, through its interactive and authorative presentation style, may intensify the pattern of frequent consultations among those who are prone to worry about their health.

A major finding from this study was a significant positive relationship between cyberchondria and intolerance of uncertainty. This supports transdiagnostic anxiety models that view intolerance of uncertainty as an important risk factor for worry and compulsive information- seeking behavior in our lives (Carleton, 2016). Thus, people who are uncomfortable with not having clear, confident answers, may use AI tools to obtain some sense of confidence and develop clarity about their health.

Additionally, participants who were classified as "high" users of AI reported much higher levels of cyberchondria than "low" AI users, and that women experienced a significantly greater degree of cyberchondria than men while there were not as significant differences between men and women when it came to intolerance of uncertainty. Therefore, AI efforts to provide people with the expectation of reassurance may be one of the many ways people are coping with uncertainty in their everyday lives.

7.2 Limitations

There are many limitations to this study, even though it contributes to our knowledge base. One major limitation is due to the cross-sectional design, which prevents researchers from being able to draw causal conclusions between the presence of AI reassurance-seeking and cyberchondria. The study found that there was a significant association between AI use and cyberchondria, but researchers were unable to ascertain whether the use of AI increases anxiety levels or that those who suffer from anxiety are more likely to have frequent interactions with AI systems. In addition, the use of self-report measures may have introduced bias into participant responses (e.g., social desirability bias and the possibility of inaccurate recall about frequency of AI use). Furthermore, AI users in this study were classified by only a single-item measure, which limits how AI users can be measured due to the multi-faceted nature of reassurance-seeking that cannot be captured solely by using frequency of use. Another limitation of this study's design is that it utilized convenience sampling; hence, the generalizability of findings beyond young adults is limited due to samples not being representative of individuals from other age ranges and potentially subjected to cultural and/or demographic variations. In addition, other uncontrolled variables (e.g., baseline levels of anxiety, personality traits or health literacy) may be present, all of which have the potential to influence both AI reassurance-seeking behaviours and severity of cyberchondria.

7.3 Future Implications

To enhance a clearer understanding of the relationships and direction of effect (causality) between AI assurance seeking and anxiety outcomes, longitudinal and experimental research will need to be conducted. The development

of a standardized and psychometrically validated scale to measure AI assurance seeking would provide a more accurate measure of AI assurance seeking and enable researchers to take a more nuanced approach to studying relationships between AI assurance seeking and anxiety outcomes. Studies with different clinical populations and across different ages would offer additional valuable information regarding the extent to which the results of the initial studies could be generalized to other populations. The incorporation of objective behavioral data (i.e., usage logs) might provide greater methodological rigor and lessen reliance upon self-report measures. Interdisciplinary collaboration between psychologists and developers of AI might allow for incorporation of mental health protection into AI systems. Future research that targets intolerance of uncertainty as a potential intervention will possibly decrease maladaptive use of AI.

References

Abramowitz, J. S., & Braddock, A. E. (2011). *Psychological treatment of health anxiety and hypochondriasis: A biopsychosocial approach*. Hogrefe Publishing.

Araujo, T., Helberger, N., Kruikemeier, S., & de Vreese, C. H. (2020). In AI we trust? Perceptions about automated decision-making by artificial intelligence. *AI & Society, 35*(3), 611–623.

Balogun, A. G., & Alabi, A. T. (2020). Cyberchondria and health anxiety among university students. *Journal of Health Psychology, 25*(11), 1689–1699.

Baxter, A. J., Scott, K. M., Ferrari, A. J., Norman, R. E., Vos, T., & Whiteford, H. A. (2016). Challenging the myth of an "epidemic" of common mental disorders. *Psychological Medicine, 46*(2), 357–370.

Bickmore, T., & Picard, R. (2005). Establishing and maintaining long-term human-computer relationships. *ACM Transactions on Computer-Human Interaction, 12*(2), 293–327.

Bottesi, G., Ghisi, M., Altoè, G., Conforti, E., Melli, G., & Sica, C. (2018). The intolerance of uncertainty scale: Psychometric properties in Italian samples. *Journal of Anxiety Disorders, 53*, 18–27.

Carleton, R. N. (2016). Into the unknown: A review and synthesis of contemporary models involving uncertainty. *Journal of Anxiety Disorders, 39*, 30–43.

Carleton, R. N., Norton, P. J., & Asmundson, G. J. G. (2007). Fearing the unknown: A short version of the Intolerance of Uncertainty Scale. *Journal of Anxiety Disorders, 21*(1), 105–117.

Cougle, J. R., Fitch, K. E., Fincham, F. D., Riccardi, C. J., Keough, M. E., & Timpano, K. R. (2016). Excessive reassurance seeking and anxiety pathology. *Journal of Anxiety Disorders, 38*, 87–95.

Dugas, M. J., Gagnon, F., Ladouceur, R., & Freeston, M. H. (2015). Generalized anxiety disorder: A cognitive model. *Behaviour Research and Therapy, 33*(4), 411–425.

Einstein, D. A. (2014). Extension of the transdiagnostic model to focus on intolerance of uncertainty. *Clinical Psychology: Science and Practice, 21*(3), 280–300.

Elhai, J. D., Levine, J. C., & Hall, B. J. (2019). The relationship between anxiety sensitivity and problematic smartphone use. *Computers in Human Behavior, 87*, 15–22.

Fergus, T. A. (2015). Anxiety sensitivity and intolerance of uncertainty as potential risk factors for cyberchondria. *Journal of Affective Disorders, 184*, 305–309.

Fergus, T. A., & Russell, L. H. (2016). Does cyberchondria overlap with health anxiety? *Journal of Anxiety Disorders, 38*, 88–94.

Jokic-Begic, N., Lauri Korajlija, A., & Mikac, U. (2020). Cyberchondria in the age of COVID-19. *PLoS ONE, 15*(12), e0243704.

Jungmann, S. M., & Witthöft, M. (2020). Health anxiety and cyberchondria during COVID-19. *Journal of Anxiety Disorders, 76*, 102239.

Longoni, C., Bonezzi, A., & Morewedge, C. K. (2019). Resistance to medical artificial intelligence. *Journal of*

Consumer Research, 46(4), 629–650.

Marengo, D., Sindermann, C., Elhai, J. D., & Montag, C. (2020). One social media company to rule them all. *Addictive Behaviors Reports, 11*, 100253.

McElroy, E., & Shevlin, M. (2017). The development and validation of the Cyberchondria Severity Scale (CSS). *Journal of Anxiety Disorders, 28*(2), 259–265.

McElroy, E., Kearney, M., Touhey, J., Evans, J., Cooke, Y., & Shevlin, M. (2019). The CSS- 12: Development and validation of a short-form version of the Cyberchondria Severity Scale. *Cyberpsychology, Behavior, and Social Networking, 22*(5), 330–335.

McLean, C. P., & Anderson, E. R. (2009). Gender differences in anxiety disorders. *Clinical Psychology Review, 29*(6), 496–505.

Miner, A. S., Milstein, A., & Hancock, J. T. (2019). Talking to machines about personal mental health problems. *JAMA, 320*(14), 1417–1418.

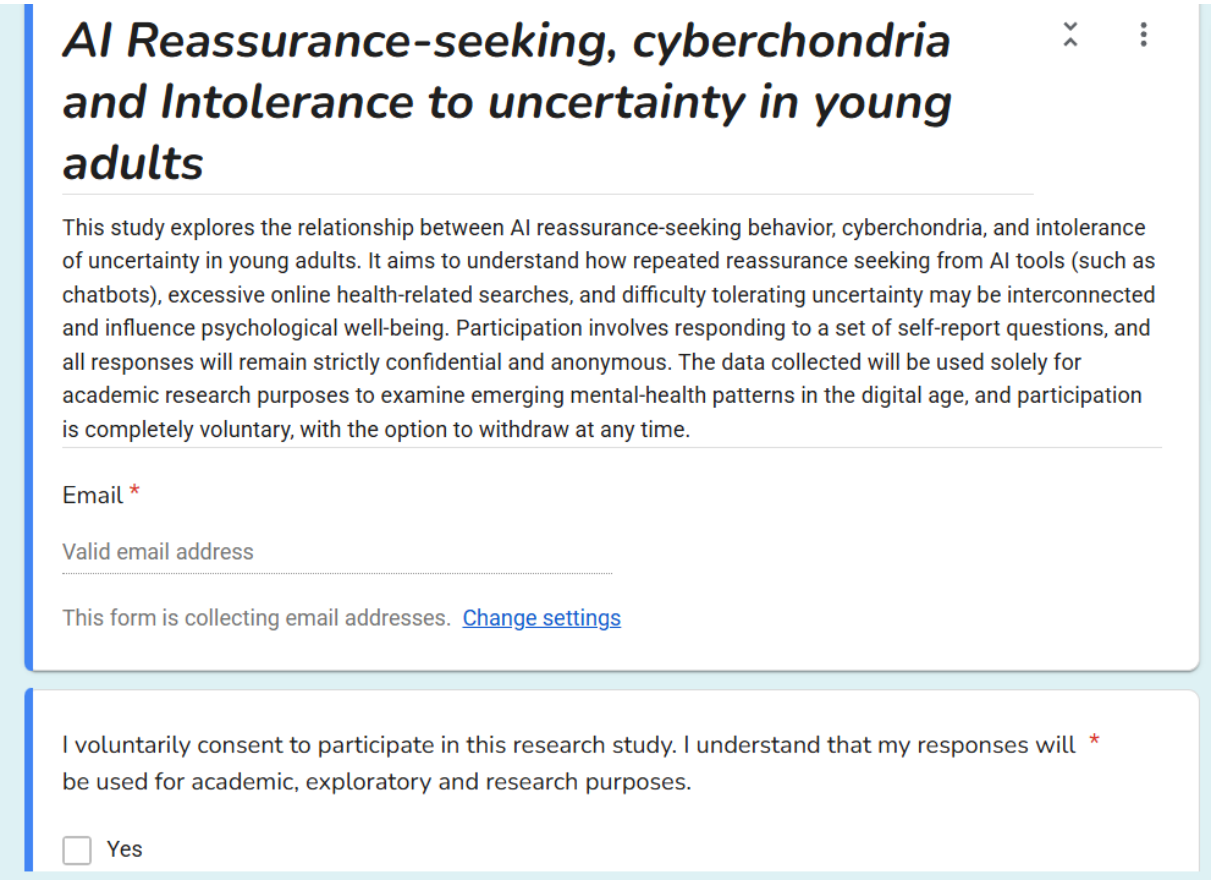
Rozgonjuk, D., Elhai, J. D., Täht, K., Vassil, K., & Levine, J. C. (2019). Fear of missing out and problematic smartphone use. *Computers in Human Behavior, 89*, 259–266.

Salkovskis, P. M. (1991). The importance of behaviour in the maintenance of anxiety and panic. *Behavioural Psychotherapy, 19*(1), 6–19.

Starcevic, V., & Berle, D. (2013). Cyberchondria: Towards a better understanding. *Expert Review of Neurotherapeutics, 13*(2), 205–213.

Topol, E. (2019). *Deep medicine: How artificial intelligence can make healthcare human again*. Basic Books.

CONSENT FORM



AI Reassurance-seeking, cyberchondria and Intolerance to uncertainty in young adults

This study explores the relationship between AI reassurance-seeking behavior, cyberchondria, and intolerance of uncertainty in young adults. It aims to understand how repeated reassurance seeking from AI tools (such as chatbots), excessive online health-related searches, and difficulty tolerating uncertainty may be interconnected and influence psychological well-being. Participation involves responding to a set of self-report questions, and all responses will remain strictly confidential and anonymous. The data collected will be used solely for academic research purposes to examine emerging mental-health patterns in the digital age, and participation is completely voluntary, with the option to withdraw at any time.

Email *

Valid email address

This form is collecting email addresses. Change settings

I voluntarily consent to participate in this research study. I understand that my responses will be used for academic, exploratory and research purposes. *

Yes

QUESTIONNAIRES

Intolerance of Uncertainty Scale - Short Form

(Carleton, Norton, & Asmundson, 2007)

Please circle the number that best corresponds to how much you agree with each item.

	Not at all characteristic of me	A little characteristic of me	Somewhat characteristic of me	Very characteristic of me	Entirely characteristic of me
1. Unforeseen events upset me greatly.	1	2	3	4	5
2. It frustrates me not having all the information I need.	1	2	3	4	5
3. Uncertainty keeps me from living a full life.	1	2	3	4	5
4. One should always look ahead so as to avoid surprises.	1	2	3	4	5
5. A small unforeseen event can spoil everything, even with the best of planning.	1	2	3	4	5
6. When it's time to act, uncertainty paralyses me.	1	2	3	4	5
7. When I am uncertain I can't function very well.	1	2	3	4	5
8. I always want to know what the future has in store for me.	1	2	3	4	5
9. I can't stand being taken by surprise.	1	2	3	4	5
10. The smallest doubt can stop me from acting.	1	2	3	4	5
11. I should be able to organize everything in advance.	1	2	3	4	5
12. I must get away from all uncertain situations.	1	2	3	4	5

Score:_____

Prospective Anxiety Subscale: sum of items 1,2,4,5,8,9,11
Inhibitory Anxiety Subscale: sum of items 3,6,7,10,12
Total Score: sum of all items

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CSS-12

Please read the following statements and indicate how they typically apply to you by circling the appropriate number. Please note that this questionnaire relates to *perceived medical conditions* (i.e. conditions you think you might have) rather than conditions that have been diagnosed by a medical profession.

	Never	Rarely	Sometimes	Often	Always
1. If I notice an unexplained bodily sensation I will search for it on the internet	1	2	3	4	5
2. Researching symptoms or perceived medical conditions online distracts me from reading news/sports/entertainment articles online	1	2	3	4	5
3. I read different web pages about the same perceived condition	1	2	3	4	5
4. I start to panic when I read online that a symptom I have is found in a rare/serious condition	1	2	3	4	5
5. Researching symptoms or perceived medical conditions online leads me to consult with my GP	1	2	3	4	5
6. I enter the same symptoms into a web search on more than one occasion	1	2	3	4	5
7. Researching symptoms or perceived medical conditions online interrupts my work (e.g. writing emails, working on word documents or spreadsheets)	1	2	3	4	5
8. I think I am fine until I read about a serious condition online	1	2	3	4	5
9. I feel more anxious or distressed after researching symptoms or perceived medical conditions online	1	2	3	4	5
10. Researching symptoms or perceived medical conditions online interrupts my offline social activities (e.g. reduces time spent with friends/family)	1	2	3	4	5
11. I suggest to my GP/medical professional that I may need a diagnostic procedure that I read about online (e.g. a biopsy/ a specific blood test)	1	2	3	4	5
12. Researching symptoms or perceived medical conditions online leads me to consult with other medical specialists (e.g. consultants)	1	2	3	4	5