



NATIONAL CENTER FOR HEALTH STATISTICS

Rapid Surveys System (RSS)

Round 8 Cognitive Interviewing Report



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Abstract

Introduction: The staff of the National Center for Health Statistics' (NCHS) Collaborating Center for Questionnaire Design and Evaluation Research (CCQDER) evaluated questions included on NCHS' Rapid Surveys System (RSS) Round 8 questionnaire. Four topics were under investigation in this round: risk perception for the use of drugs and other substances, whole person health with respect to meaning and purpose in daily life, seeking emotional support from artificial intelligence (AI) chatbots, and recovery from problems with alcohol or drug misuse and mental health.

Methods: Twenty cognitive interviews were conducted virtually to evaluate the question-response process and determine patterns of interpretation and response error. Respondents were purposively recruited from a variety of demographic backgrounds, with an emphasis on experience with the use of AI chatbots.

Results: On the whole, respondents were able to answer questions in each section with little error and minimal difficulty, and, to a large extent, interpretations fell within the scope of question intent. However, a few noteworthy issues did occur and should be taken into account when interpreting the survey data. These issues are 1) including quantity and frequency of substance use in some of the risk perception items but only frequency of use in other risk perception items, 2) vagueness of the term "meaning and purpose" in a Whole Person Health question, 3) emotional support context effects on subsequent AI chatbot use questions, and 4) the use of the term "recovery" when referring to mental health problems.

Keywords: risk perception, whole person health, AI chatbots, recovery

Introduction

The staff of the National Center for Health Statistics' (NCHS) Collaborating Center for Questionnaire Design and Evaluation Research (CCQDER) evaluated questions included on the Rapid Surveys System (RSS) Round 8 as a quality improvement initiative. The RSS is a web-based survey platform designed to produce timely estimates for emerging health topics (1). The study received both Office of Management and Budget (OMB) and NCHS/Centers for Disease Control and Prevention (CDC) Human Subjects approval and was determined to be excepted research for Institutional Review Board purposes.

The goal of the study was twofold – to document constructs measured by the questions and to identify any question response complications, including response error patterns (2,3). Findings are intended to facilitate a better understanding of the meaning of survey estimates produced by RSS 8 and to guide any further question development on topics relevant to future RSS rounds.

CCQDER conducted this study using cognitive interviewing. For RSS Round 8, there were four topics under investigation: risk perception for the use of drugs and other substances, whole person health with respect to meaning and purpose in daily life, seeking emotional support from artificial intelligence (AI) chatbots, and recovery from problems with alcohol or drug use and mental health.

The research method is outlined next. This is followed by a summary of the findings and a conclusion. The full analysis is in Appendix I, in a question-by-question format.

Methodology

All items under investigation were general population questions; therefore, recruitment for cognitive study participation focused on including respondents with a mix of demographic characteristics such as race, sex, age, and educational attainment. In addition, due to the number of questions on the use of AI chatbots for emotional support, respondents who reported using AI chatbots (for any reason, not just for emotional support) were screened into the study. Recruitment was carried out through either social media, word-of-mouth, or the CCQDER Respondent Database.

Table 1 summarizes the demographic composition of the purposive sample. A total of 20 interviews were conducted. Most respondents were either Black (9) or White (9) and one identified as Black and Hispanic. A majority were female (15). However, there was a broad range of ages roughly evenly spread, from respondents in their 20's through those in their 70's. Finally, most respondents had a Bachelor's degree (11), while others (6) had less than a Bachelor's. Only two respondents had more than a Bachelor's degree.

Table 1. Sample Demographics

Demographic Variables	Number (<i>n</i> = 20)
Race/Ethnicity*	
Asian	1
Black or African American	10
Hispanic or Latino	1
White	9
Sex	
Female	15
Male	5
Age	
18 – 29	4
30 – 39	4
40 – 49	5
50 – 59	3
60 and older	4
Education	
High School Diploma or Equivalent	2
Some College	4
Bachelor's Degree	11
Graduate Degree	2
Missing	1
*Numbers do not add to 20 because respondents could choose more than one category.	
SOURCE: National Center for Health Statistics, Collaborating Center for Questionnaire Design and Evaluation Research, 2026.	

Interviews took place virtually using a video conference platform approved by NCHS and the CDC Information Security Offices. Each interview lasted no longer than one hour. In order to capture respondents' initial reaction to the survey items, interviewers first read the questions to respondents and recorded their answers. The interviewer then followed up with retrospective probes to explore respondents' understandings of the questions, rationales for their answers, and whether any response difficulty occurred. The cognitive interview test instrument is included for reference in Appendix II. A remuneration of fifty dollars (in the form of an electronic gift card) was provided to all participants at the interview's conclusion.

Qualitative data analysis was guided by the principles of grounded theory adapted to cognitive interviewing (4-6). Using the constant comparative method, analysts compared the rationale behind respondent answers across all participants for each question. This systematic comparison yielded patterns of question interpretation and response difficulties. These patterns are summarized next.

Overall Findings

This section discusses high-level findings associated with each topic.

Section 1: Risk Perception

The risk perception questions, drawn from the National Survey of Drug Use and Health (NSDUH) (7), ask respondents how much people risk harming themselves physically and in other ways when they use certain drugs and other substances. RSS 8 included questions on five of the 11 risk perception substances from NSDUH, including cigarettes, marijuana, LSD (lysergic acid diethylamide), heroin, and alcohol. While respondents could answer these questions, the inconsistent parameters across substances in this series sometimes caused confusion.

Some risk perception questions include both quantity and frequency of use (cigarettes and alcohol) while others include only frequency (marijuana, LSD, and heroin). The items on marijuana, LSD, and heroin that include frequency but lack quantity often caused respondents to lean into their beliefs about the inherent harmfulness of these drugs overall – not just in relation to frequency – in order to provide an answer.

In addition, the two alcohol risk perception questions that include quantity *and* frequency imposed additional response burden. This difficulty was enhanced by the fact that the two alcohol questions struck respondents as somewhat similar in terms of quantity (four or five drinks versus five or more drinks) but quite different in terms of frequency (nearly every day versus once or twice a week). As a result, when answering the questions, respondents either focused on frequency alone or on their perceived ideas of alcohol's inherent harmfulness.

Section 2: Whole Person Health

The Whole Person Health index refers to a battery of nine items meant to capture essential components of health from the National Center for Complementary and Integrative Health (8). These items have been previously validated (9), but a new question was added for inclusion on the National Health Interview Survey (10) and was evaluated in this study. This question asks respondents to rate their ability to find “meaning and purpose” in their daily lives. While respondents answered easily, the concept was open to different interpretations. Respondents relied on various factors to arrive at their responses, which formed four patterns of interpretation. These patterns include 1) being of service to others, 2) finding a path or career in life, 3) managing daily routines, and 4) religiosity. With an intent that is overly broad, it's difficult to determine what the question truly measures.

Section 3: Artificial Intelligence (AI) Help Seeking

Artificial intelligence and chatbots are a fairly recent and rapidly proliferating development. A new set of questions were developed to begin exploration of the topic and whether respondents could easily answer questions on the subject. Findings suggest a mixed bag, with some questions performing better than others.

The first two questions were generally understood as intended and no obvious response error was found. The first question in this section (AI_AI2: Have you ever used an artificial intelligence (AI) chatbot or companion?) was broad enough to capture a variety of users. Respondents reported using chatbots with varying degrees of frequency, from daily to only once. Additionally, reasons for using chatbots ranged from personal chores and work tasks to search engine functions. ChatGPT was well known, while Wysa and Replika were unfamiliar. Examples mentioned by respondents when confirming their understandings of the question included Gemini, Copilot, Grok, and Perplexity.

The second question (AI_AI3: Have you ever used an AI chatbot or companion for emotional support?) was also well understood. Respondents answered in terms that are commensurate with question intent and no response error was found.

However, the remaining questions (that followed the question on emotional support) were not understood in a consistent manner by all respondents. These questions asked respondents how much they agreed or disagreed with a variety of statements including, for example:

AI_AI6a: You feel understood when talking to AI chatbots or companions

AI_AI6b: You feel a sense of connection when talking to AI chatbots or companions.

Some respondents filtered these questions through the lens of emotional support, due to the context effect created by the second question (AI_AI3) and the extent to which they used chatbots for emotional support. This effectively split respondents into two groups, those who interpreted the remaining questions through the lens of emotional support and those who did not. Two response patterns followed from this. The first pattern was to interpret the questions as asking whether chatbots provide accurate and truthful information. The second pattern was to interpret the questions as asking whether chatbots offer emotionally supportive answers. While these are interrelated concepts, the former interpretation emphasizes the idea that algorithms are written to provide correct, unbiased information. The latter relies more on believing that algorithms are specifically designed to offer results that are appealing to users, irrespective of empirical reality.

Section 4: Substance Use, Mental Health, and Recovery

This section contains four questions. The first two ask about drug and alcohol misuse and recovery and the last two ask about mental health and recovery. For both topics respondents are asked whether they ever had a problem with drugs/alcohol or mental health and if so, whether they considered themselves to be in recovery or recovered from the problem. Overall, the drug/alcohol questions were more straightforward to answer than the mental health questions.

The drug/alcohol questions performed well. Respondents had similar interpretations of what a drug or alcohol problem looks like, irrespective of their personal experiences with drugs or alcohol (only two respondents reported having a prior problem with alcohol use).

Respondents also had some shared ideas about what being in recovery means, with the only possible variation relating to whether the question was asking about recovery programs in particular versus personal efforts to abstain from or reduce the use of drugs or alcohol. Even so, no response error was detected for the drug/alcohol questions.

The mental health questions, on the other hand, exhibited a wider range of interpretations, some degree of confusion, and one case of response error.

Seven respondents reported having had a mental health problem. Among this group, four patterns emerged that explain respondent definitions of meaning: struggles with anxiety, addiction, grief, and clinical diagnosis. The 13 respondents who answered “no” had a narrower range of what would constitute a mental health problem: anxiety or a change in personality. Nevertheless, the explanations offered by each group represent similar notions of what kind of mental health experiences might constitute a problem.

However, one false negative was detected for a respondent who described herself as effectively managing her mental health, such that it was no longer a problem in her life. Even though the question asks, “have you EVER had a problem...,” she focused on her successful management of symptoms and answered “no.” Had she seen the follow-up question (on recovery), she said she would have answered “yes” to both questions.

Finally, the question asking if respondents consider themselves to be in recovery or recovered from a mental health problem was not well understood. Respondents did not always associate the language of “recovery” with mental health issues, particularly when these problems were perceived as chronic health conditions, which are managed but not cured. Some respondents were not sure how to answer as a result.

Conclusion

On the whole, respondents were able to answer questions in each section with little error and minimal difficulty, and, to a large extent, interpretations fell within the scope of question intent. However, all results shown here should be taken into account when interpreting RSS 8 survey data. Appendix I contains the full and detailed analysis for each individual question in the cognitive testing instrument.

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Appendix I: Question-by-Question Analysis

Section 1: RISK PERCEPTION (An analysis follows each item in the questionnaire.)

We are interested in your opinion about the effects of using certain drugs and other substances. Please indicate how much you think people risk harming themselves physically and in other ways when they do each of the following activities. If you're not sure, choose an answer for the amount of risk that comes closest to what you think might be true for that activity.

RIS_RK01a

How much do people risk harming themselves physically and in other ways when they smoke one or more packs of cigarettes per day? Would you say no risk, slight risk, moderate risk, or great risk?

Findings: Respondents had no difficulty with this question and most (but not all) answered "great risk." Several patterns of judgment emerged.

Cigarettes as inherently harmful: Response judgments were based on several factors. One factor was the perception of cigarette smoking as categorically harmful to one's health. For example, one respondent said, "The science has proven that smoking cigarettes, period, is detrimental to the health and well-being of individuals." Some respondents identified the problem as one of tobacco additives more than the tobacco itself. One respondent said, "Okay, so for cigarettes, the tobacco chemicals and stuff [in] cigarettes are very harmful for us."

Other respondents agreed that smoking is inherently harmful but made their assessment by also taking into account the quantity specified by the question, which was often judged to be excessive. For example, one respondent said, "Well, I thought about how often and how much is being consumed. That was part of the rationale. Like that [one or more packs a day] has to be very harmful."

Some respondents maintained that, while cigarette smoking may be inherently harmful, predicting detrimental health outcomes is not necessarily straightforward. One respondent explained, "I say slight risk because I know a lot of smokers who go through their daily life without any ailments. And then I know a lot of people who don't smoke who have more ailments than people who smoke cigarettes!" Other respondents with similar rationales chose "moderate risk." One respondent explained (words in italics are interviewer speech):

And I know smoking cigarettes can lead to lung cancer and things of that nature. And it can slowly kill you. So that's where I say moderate risk for that one. So *why not great risk?* I had thought about it. I know everybody is different as far as the body is concerned, their health. So that's why I just kind of stayed in the middle of the road with that one, because I know some people smoke a pack a day and they still living.

Experience with smokers or smoking: Another judgment pattern was informed by having a degree of experience with smokers. For example, one respondent who never smoked had nevertheless witnessed many negative outcomes of smoking. She said:

Well, number one, I told you, I'm a retired nurse. So, I've seen the consequences of that [smoking]. And my own father, who was very fit in so many ways and, you know, kind of an athlete, but he was from the old country and he smoked. Never had a weight problem, never had anything like that. But the smoking is what they said killed him.

On the other hand, having personal experience with smoking may lead to a misreading of the question. For example, one respondent answered "no risk" because, to this point in time, she has seen no ill effects on her health. She said, "I've smoked before, so I know that it doesn't pose any risk, I guess mentally or physically, when I've had one or two cigarettes a day." The interviewer reread the question, emphasizing the specified quantity of "one or more packs of cigarettes per day." The respondent said:

I mean overtime it can pose risks. Yes, over time I definitely would say that. *But initially you were answering based on your own experience?* I was going by personal experience.

The respondent smokes much less than one pack a day and answered on this basis. However, by focusing on her own experience with cigarettes, she disregarded the parameters of the question. Other smokers may be prone to the same response pattern.

RIS_RK01c

How much do people risk harming themselves physically and in other ways when they smoke marijuana once or twice a week? Would you say no risk, slight risk, moderate risk, or great risk?

Findings: Respondents had no difficulty with this item but its lack of any reference to quantity required respondents to focus not just on frequency but also on their belief in the inherent harmfulness of marijuana.

Focus on frequency: Many respondents did not perceive once or twice a week as excessive. One respondent said, "I have never heard [of] someone having major health consequences [from] using marijuana once or twice a week." Another respondent specifically compared it to the cigarette question and said, "So I was like, okay, if they just doing it, you know, once or twice out of the week, it probably won't be as harmful [as everyday]." Similarly, another respondent reasoned, "I think if you had said the same thing about cigarettes, once or twice a week, I would've said slight risk [for cigarettes too]."

Inherent risk: Another group of respondents focused less on frequency and more on their beliefs about the general harmfulness – or benefits – of marijuana. For example, unlike cigarettes, marijuana has increasingly become associated with therapeutic uses. One respondent said, “So with the marijuana, I know they use marijuana for treatment of different types of ailments, helping with cancer patients and everything. So that’s why I stated that it’s not that harmful.”

Even when not taking medical uses of marijuana into account, several respondents had a view of marijuana as a relatively harmless substance. One respondent said, “Because I know a couple people that smoke a lot when it comes to weed and I think, just on the outside looking in, they seem overall healthy. I don’t see any issues.” Another respondent said, “I don’t see marijuana as a drug. I see that as a natural part of the earth type-of-thing...I haven’t seen anything where people are like, yeah, I went out and killed a whole bunch of people because I was high.”

Conversely, one respondent did believe that marijuana was inherently harmful, so “once or twice a week” made no difference in her judgment. She explained:

From what I’ve read, I’m frankly still not a proponent of marijuana and I know that’s changing in public culture. Again, it comes to things I’ve seen in other people. There was a friend that I had who was – he had been smoking marijuana and I saw it change his personality. He was not as active, not as ambitious. Just doing video games all the time. To me that was very harmful.

One respondent did try to weigh inherent risk against more frequent use. She said, “They can have a medical benefit...But I do feel that if it’s abused and, you know, do it a lot, they can definitely be detrimental to your health. So that’s why I said moderate.”

RIS_RK01e

How much do people risk harming themselves physically and in other ways when they use LSD once or twice a week? Would you say no risk, slight risk, moderate risk, or great risk?

Findings: Respondents used rationales similar to previous questions in this section, but a core difference is that LSD was not as familiar as the other substances. Additionally, this question also lacked any reference to quantity. Most respondents answered by speculating about its inherent risks.

Inherent risk: Unlike marijuana, many respondents thought LSD to be inherently harmful, irrespective of the quantity used. Therefore, the lack of any specified quantity was not problematic for respondents in this group. For example, one respondent said, “It seems clear that LSD is...not safe in any amount. Even from a legal perspective you’re not a legal member of society...Safety can also be interpreted as social safety and being a member of the community.” Another person who said she was old enough to remember joked, “Well, you know Timothy [Leary], how it worked out for him. Not very well.”

Respondents often grouped LSD and heroin (in the next question) as similarly risky. One respondent said:

Yeah, I put those drugs in the same category. I know using those drugs are a big no-no. They can lead to hallucination, you know, seeing things that are not there. And those drugs are hard to get off of. They are heavily addictive. And they are very, very detrimental to your health. So, I put both of those in the same category. They can actually kill you. I've heard of countless stories where people have died over heroin overdose or LSD overdose.

On the other hand, some respondents did not see LSD as categorically dangerous and answered "moderate risk." One respondent said, "I feel like LSD, it could vary. I'm thinking of people [who] go to parties, go to raves. It's like, okay." With similar logic, another respondent said:

So, I feel like there's still a risk that negative impacts can happen or some might have hallucinations long term. *I get your rationale there. But why not great risk though?* Not great risk, I guess, because you can still use it sometimes and be okay.

A couple respondents thought there might even be some benefits associated with LSD. One respondent said, "Because I do a lot of ceremonies with indigenous people. And I know certainly that they feel like they go into altered spaces and their consciousness is expanded...I tie that in to maybe what LSD is." Another respondent said, "That's why I said moderate, because I heard of experiences of people tripping out. But then I also heard experiences of people having, like, good experiences too and claiming it opened up different minds."

Lack of knowledge: The previous two respondents pointed to a certain lack of concrete knowledge about LSD but answered without reluctance. However, a couple respondents who were also unfamiliar with LSD expressed more uncertainty with their answers. One respondent answered "great risk" but voiced doubt. She said, "I don't know very much about LSD. But it doesn't seem like the kind of thing that you do socially. But I could be wrong." Another respondent also chose "great risk." In explaining his answer, he said he assumed there were risks, "Although I don't know what they are." The instruction to choose an answer that comes closest to what they think might be true (for any question in this series) may have helped prompt these respondents to provide an answer, even when they were unsure about it.

RIS_RK01g

How much do people risk harming themselves physically and in other ways when they use heroin once or twice a week? Would you say no risk, slight risk, moderate risk, or great risk?

Findings: Respondents appeared to be more aware of heroin than LSD and all judged it to be of great inherent risk. The lack of a specified quantity in this question was not

problematic for this reason. Four patterns guided respondents' judgments.

Addiction: Many respondents pointed to addiction as the primary risk associated with heroin. One respondent said, "I know from when I used to work at the medical center that you could obviously see the results of people that were on heroin, how they couldn't stop." Several respondents believed that addiction was almost immediate. One respondent reasoned, "Heroin I know is incredibly addictive, even if you try it once. So, to me, I don't get the whole 'once or twice a week.' If you're doing heroin, you're not doing it once or twice a week at a party." Another respondent with direct experience had the same rationale, "I worked in drug and alcohol and it really, once they had it, it was almost like...it was almost impossible not to go back there [and use it] again."

Impurity: Respondents sometimes identified impurity as a risk associated with heroin. One respondent said, "The purity of heroin and how, like, the cartels are using drugs to stretch their product base so that less [quantity] can be sold to more people. I would say that that's why heroin was an increased risk." Another respondent expressed the same concern and said, "You have to go to [a drug dealer] and there's greater risk of getting it laced with something else."

Quantity: Other respondents pointed out that it takes very little heroin to do significant damage. This was simply due to the nature of the drug itself. One respondent said, "Yeah, the effect on the body – I think it's too hard for the body to handle it. So, any amount is just dangerous." Another respondent said, "All it takes is one time and you could die."

Overdosing: Finally, similar to the previous example, some respondents mentioned overdosing as a central concern with using heroin. One respondent said, "Because you see so many people who have died from heroin overdose. I have a friend whose son died on his birthday from overdosing."

RIS_RK01j

How much do people risk harming themselves physically and in other ways when they have four or five drinks of an alcoholic beverage nearly every day? Would you say no risk, slight risk, moderate risk, or great risk?

Findings: There was very little response variation on this item. Most respondents chose "great risk", and a few opted for "moderate risk." No one chose the first two categories because all respondents perceived this amount of drinking to be harmful, regardless of whether they focused on quantity and frequency or simply just the inherent harmfulness of alcohol.

Inherent risk: Like some of the other substances, some respondents saw any amount of alcohol to be unhealthy. One respondent said, "There's more research in the past year that even one drink is not beneficial." Another respondent also expressed the belief that science has now shown alcohol to be categorically harmful. He said:

Alcohol is textbook poison. It is an extraction from a fermentation process. The body does not use alcohol. It metabolizes alcohol rapidly and immediately because the body recognizes it as an invasion that it wants to eliminate as quickly as possible...There's nothing healthy about alcohol and anything above one drink is a great risk to health.

Personal experience: Some respondents based their answers on their degree of experience with harmful outcomes associated with alcohol misuse. For example, some respondents witnessed friends or family struggle with alcohol. One respondent answered "great risk" because:

I saw relatives destroy their lives by drinking four or five or more drinks a day and no matter how much help we would try to offer, they just never, you know, they said, 'Yeah, yeah, I know.' But they wouldn't do anything about it. And I saw them go into tailspins and it's very hard for them to come back out.

Other respondents had even more direct experiences. For example, one respondent talked about the effect alcohol had on his father. He said:

I can relate to the alcohol [question] because my dad, he was an alcoholic and he was a heavy alcoholic. He was addicted to it. There are times when he tried to get off of it, but he couldn't. And it got to a point where it seemed as if his body couldn't function if he didn't have alcohol in his system.

Another respondent conveyed the effect that her mother's alcohol use had on the respondent. She said:

I was a baby that was born with a congenital abnormality because my mother was a heavy drinker throughout her pregnancy with me. So, I have the inability to procreate, and I have primary amenorrhea as a result of that.

Quantity: The above respondents focused on the inherent risk or adverse personal experiences with alcohol, but a few respondents answered based on quantity *and* frequency, as specified by the question. For example, one respondent said, "It was easy for me to say great risk with like four to five [drinks] every single day. I think it's the amount, quantity, and frequency that kind of did it, I think, with alcohol." Another respondent said, "Great [risk] on this one because, again, too much of anything can overstress the body and cause harm."

RIS_RK01k

How much do people risk harming themselves physically and in other ways when they have five or more drinks of an alcoholic beverage once or twice a week? Would you say no risk, slight risk, moderate risk, or great risk?

Findings: On the heels of the last question (and perhaps due to earlier questions' omissions of quantity altogether), some respondents in this question focused on frequency (once or twice a week) at the expense of quantity (five or more drinks). Because four or five drinks (in the previous question) was not seen as substantially different from 5 or more drinks (in this question), some respondents fundamentally misunderstood this question and saw less potential for harm – because once or twice a week is less harmful than nearly every day. For example, one respondent chose “slight risk” because she focused more on the infrequency of the behavior. She explained:

Because...if you go out for a happy hour once a week, you know, you're going to have four and five drinks...Or you're hanging out on a Saturday and you're grilling and you're having beers, that's not as great as if you are literally ingesting five drinks a day consistently. So, for me, alcohol is damaging. But if you're not doing that like every day, I don't think it's as great of a risk as if you're doing it every day.

Other respondents did not connect the number of drinks with the timeframe of a single sitting and instead averaged the quantity over the period of a week. For example, one respondent said, “That would be like one a day, so moderate.” Another respondent also failed to connect the stated amount with the timeframe of a single day or sitting. She answered “moderate risk” and said, “If you spread out the alcohol throughout the course of the week, you're probably not going to have as great [risk] effects as if you're drinking it all in one day.”

When respondents put more thought into it during probing, they sometimes arrived at a better understanding of the question. For example, one respondent who answered “moderate risk” decided to change her answer during probing. She said:

Once or twice a week, right. I think what I did, though, is miss the ‘five or more drinks.’ Because that would end up being 10 drinks a week. So I may have to switch that to being a great risk. I hadn't computed that [to be] 10 drinks a week, which I don't think is too healthy for our body. I think that's a bit much.

In fact, only one respondent seemed to immediately grasp the intent of the question. She answered “great risk” because, “That's binge drinking.” No one else made this initial connection.

Section 2: WHOLE PERSON HEALTH

WPH_SPRT

How would you rate your ability to find meaning and purpose in your daily life? Would you say excellent, very good, good, fair, or poor?

Findings: This question, perhaps by design, is conceptually broad. Respondents were able to answer it, but the phrase “meaning and purpose” encompassed many ideas.

Some notions were of a more profound nature (e.g., spiritual), while others were more ordinary (e.g., daily routines). The interpretive patterns are discussed below.

Being of service: Some respondents described meaning and purpose as something obtained through the act of helping others. This could be through voluntary organizations. For example, one respondent said, “I would say volunteering, helping out others.” Another respondent gave multiple examples of her volunteer work. She said, “I belong to a social club and we do a lot of community outreach, a lot of giving back...I go to the nursing home every second Sunday of the month. We feed the homeless two or three times a month.” Other respondents thought of being of service to their family or friends. One respondent explained:

Oh, because I take care of my mom and I just try to make sure everybody is doing well in my circle. So, I feel like that gives me purpose every day. And also, you know, I’m very much an animal lover. I have animals everywhere, so I have to take care of them. So, all of that gives me purpose in life.

Finding a path in life: Some respondents took this question to mean the extent to which they generally have direction in the world. For example, one respondent said, “I was thinking, like, kind of just my reason to live. What makes me smile, what makes me kind of feel like I [have a] reason to keep on going.” Another respondent had a similar perspective but described it as a struggle. She said:

I’m in a state [of mind] where I’m still trying to figure out what I really want to focus on. I’m juggling between so many things that I’m considering meaningful in my life. I’m still trying to find my purpose...Just what do I really want for myself?

This interpretive pattern was often rooted in thoughts of career paths in particular. For example, one respondent said, “I’m working on advancing my career, which is an accountant or a CPA. So, I spend my time studying for those certifications and now I’m finally on my final exam.” Another respondent was in the later stages of her career and talked about how it gave her meaning and purpose. She said:

Because my purpose is to disseminate information. And I do that through my writing. And I do that through searching out opportunities for scholarships...for people who want to go back to college...And it gives me a good sense of purpose to hear that some people have benefitted from me disseminating that information.

Managing day-to-day routines: Some respondents understood this question as asking how successful they are in filling and managing their days. For example, one respondent said, “In my downtime I read a lot. I work on crafts, so I have good management and use of my time.” Another respondent also thought of her ability to manage her daily routine. She said, “Because each day I try to make like, you know, to do something during the day, like if I have to get stuff done and stuff, I try to do what I have to get done.”

Respondents who had struggles with daily life saw this question through the lens of everyday-as-survival. One respondent was concerned about a recent medical diagnosis and said:

I'm just very wary about my health going forward and I think it's important that each day I find new goals for myself. I keep a step count, for example, on my walking. When the pool is open during the summer, I try to swim as much as possible...I do try to make whatever day it is purposeful in some way.

Another respondent mentioned anxiety over growing older as the filter for how she interpreted meaning and purpose in her daily life. She said:

It's a struggle. I recently turned 40 in October. You know, that's a hallmark right there. And that's kind of like you're on the tipping edge, like you're going over, you know, this is the next chapter in [life]. I don't know where it's leading to because there's been so many damn changes. I can't keep up with my brain.

Religiosity: Finally, a couple respondents answered this question on the basis of their religious faith. One respondent said, "I have been on a spiritual path for many years. I've put a lot of time getting to the place I am today where I am very happy with myself." Similarly, a second respondent explained:

I figured that my life has a lot of meaning and purpose, especially since I have a relationship with God that has brought a lot of meaning and purpose in my life. I serve as a youth leader in my local church. I do present sermons to my church. I teach Sunday school. I teach bible study.

Section 3: AI HELP SEEKING

AI_AI2

AI chatbots or virtual companions use artificial intelligence (AI) to talk to people through text or voice, without another human involved. People use them for things like getting information, asking questions, or having conversations. Examples include ChatGPT, Wysa [WISE-uh], and Replika [REP-luh-kuh]. Have you ever used an artificial intelligence (AI) chatbot or companion? If you are unsure or don't know, you can say that.

- 1 Yes
- 0 No [GO TO NEXT SECTION – RECOVERY]
- 9 Not sure

Findings: The use of artificial intelligence and chatbots is new and evolving. However, respondents had a general understanding of the topic, and the question was broad enough to capture all types of users, ranging in frequency of use and purpose. The term ChatGPT was most familiar to respondents. No one had heard of Wysa or Replika. Other examples that were given include Gemini, Copilot, Grok, and Perplexity.

There were two cases of possible response error. One respondent answered “yes” but clarified that her use has only been with a friend who was serving as her guide to the technology. She said:

So, I have used it before, but with someone else – with friends. I’m still trying to figure out if I really need it in my life. There’s so much confusing information and too much AI tools and apps that I’m still learning about. So yeah, I have used it before, but not on a personal level myself. *Why were you doing this with a friend? For what purpose?* I think out of curiosity. So, it was just a discussion, and they could not understand why I’m not using it. They were trying to show me how to use it and how important it is and how helpful it is.

Another respondent was uncertain whether the use of chatbots by coworkers qualified as a yes because her duties involved using the information generated by ChatGPT. She ultimately decided to answer “no”, which is likely the intended response, but the following illustrates her contemplation:

I have not personally used it, but it gets used at my job. So, I don’t know if I answered that correctly. *You answered no but expressed doubts. Tell me more about that.* My boss uses ChatGPT a lot. And I don’t actually get on the computer and use ChatGPT. But I take a lot of the information that comes from it and use that in my position. *So, you kind of indirectly use AI?* Yes. I’m not the one asking the questions.

Regardless of whether each example is deemed response error or not, these two cases suggest there is room for interpretation regarding whether a person has ever “used” an AI chatbot. However, all other respondents offered more straightforward explanations that suggest their survey answers are as intended. The following are their response patterns.

Frequency of use: This question captured a variety of users, including those who have used AI chatbots only once to those who use it every day. For example, one respondent used an AI chatbot only a single time. She weighed, for a moment, her decision to answer “yes.” She said:

I only used the chatbot [Copilot] once when it first came up on my new computer just to see what it was all about. I had written something that I’m trying to get out [in a book]. I opened up that thing...and when that chat thing came back, I was like, oh no. This is nowhere near as good as what I wrote myself. So, after that I left it alone.

Other respondents use it nearly every day. One respondent remarked on the transformative nature of AI technology and his extensive use of it:

This’ll sound dramatic, but it’s a life changer. I absolutely love it. *Why is that?* You can type up a whole essay on a topic in 30 seconds. Have it be, you know,

20 pages long. If you have a company and you want to do some sort of something with invoicing, you can have it give you examples of what are the proper ways to do invoicing. You can make it do or rework your resume.

Purpose of use - search engine: Respondents cited different reasons for using AI chatbots. Several respondents mentioned its function as a search engine. One respondent said:

I actually really just started using ChatGPT probably a month ago. I had in the past, of course, used Google, which sometimes I guess relies on Gemini, but it's more of just a search feature. Basically, AI has advanced so rapidly...and so I thought, let me just check this out. And I tried asking it some questions related to what I thought were maybe complicated topics. And I was impressed by what came back to me. You know more than, say, a Google search.

Purpose of use - personal tasks: Some respondents answered "yes" to this question when they used a chatbot to assist with organizing their daily schedules and tasks. For example, one respondent said, "So planning our vacations. I use it for helping me with what I want to cook for dinner. I'm a vegetarian and sometimes I ask it to help me with meal ideas. Or maybe I ask it for advice on furnishing an apartment or something like that."

Purpose of use - work tasks: A common pattern was to answer "yes" when AI chatbots are used for work-related tasks. One respondent explained how she uses this technology to assist with professional writing. She said, "Well, I've used ChatGPT. I've used Gemini. I've used Grammarly as well...It has helped me with my resumes, with my cover letters." Another respondent said:

I am an assistant for my job and I'm responsible for note taking and things of that nature. Copilot. You pop that sucker on when a meeting starts. It takes the agenda. It wraps things up. It tells you where you are in the middle of the meeting. It's amazing, but that's all I do. I just turn it on, I'll let it go, and at the end of the meeting, I close it.

Some respondents use this technology for work in more creative ways. One respondent said, "I have my own Christian bookstore and I designed obituaries, programs, flyers, brochures. So generative AI does a great job of helping me out with those designs." Another respondent explained:

Okay, so basically, I'm a graphic designer. I use Chat[GPT] sometimes to help me know exactly different things that need to go on a flyer or something. Sometimes I might need a little boost. I might have done a flyer that I really don't like too much and so I ask the chatbot for help like that.

One respondent reported using AI for schoolwork. He said, "I've used the platform of ChatGPT in college...and it helps me because...it would break down certain questions I didn't understand into forms that I understand."

Response patterns for non-AI users: Respondents who answered “no” to this question (there were only four) expressed distrust of AI chatbot technology. One pattern was a distrust in the veracity of information provided to users. One respondent said:

I have mixed feelings about it. I feel like it's gonna do some good because it's gonna save time for people, time management. I'm not so sure about the accuracy of the information that it's gonna provide people, especially like health-related wise if you ask it health-related questions. So, I'm kind of on the fence about it in that regard.

Relatedly, one respondent discussed possible harm that can come from relying emotionally on chatbots. She said:

I have some mixed feelings. There might be some good in the fact that you hear people who are maybe very lonely [and] don't have any real contacts for whatever reason, that they can communicate with a non-person. But then you hear the other side, that sometimes it's misused and people are manipulated in some way.

Another pattern of distrust related to larger ethical issues. One respondent explained why she is resistant to its use:

I think it could be great, but I have moral and ethical issues with it. So even though I think it might potentially be a great tool – I don't think it's there yet – I have serious issues with how it's done and the effects that it has on the environment, on people's jobs.

Finally, one respondent expressed reluctance to engage with something that is not human. She said:

I'm a people person. Look-you-in-the-eye, feel-your-vibration person. An unseen, automated voice device doesn't work for me. There's nothing I can feel with chatbots. And to use [it] as a companion, for me that is totally ludicrous...The word 'artificial' right there speaks to what's missing. You're artificial, so you're not really communicating with me...There's no soul there, there's no spirit. No experiences.

AI_AI3 [ASK IF R EVER USED AI]

AI chatbots and companions can offer emotional support by helping people feel heard, cared for, understood, and comforted. Have you ever used an AI chatbot or companion for emotional support?

1 Yes

0 No [GO TO AI_AI16]

Findings: Three respondents answered “yes” to this question and the rest answered “no.” Regardless of how respondents answered, it seemed well understood by all and there was no obvious response error.

Respondents understood “emotional support” in various but related ways, including AI chatbots 1) offering strategies for managing mental health struggles, such as anxiety or depression, 2) offering advice for specific relationship difficulties with either friends or romantic partners, 3) serving as a bona fide mental health therapist, or 4) serving as a proxy friend or romantic partner.

Of those who answered “yes”, one respondent tried to use ChatGPT for emotional support but found it unsatisfying and stopped. He said:

I said [to the chatbot] I’m 35. I’m feeling very depressed [no job and no partner to start a family with]. Well, what can I do? And I let the ChatGPT give me a bunch of answers. And then I started to pick apart the way I formed that question. Because the way I worded a question to an AI algorithm is exactly what I’m going to get [in] response...I was very, I don’t know, dismayed. It’s just like I understand that it’s a program. It is an electrical impulse, zeros and ones. There is no organic side to that.

The other two respondents had more rewarding experiences. One respondent had specific interpersonal issues she wanted help in resolving. One issue was in ending what she described as a toxic friendship. She said:

I used it for emotional support in terms of getting a second, unbiased opinion on ending a friendship with one of my old friends because I didn’t want her to be a bridesmaid in my wedding because she has a drug problem. And at that point I just did not want that anywhere near my wedding and or my future kids or anything like that. And I felt kind of mean and I was getting mixed opinions from some of my friends. So, I asked ChatGPT about the situation and even asked it to help me respond to some of the [text] messages and I feel like it did a good job.

Having success there, she also used it in managing the relationship with her fiancé. She explained:

I’ve used it again to get a second opinion on a little argument I’ve had with my fiancé. It was helpful and it told me, ‘Oh, don’t pressure him and just leave him alone, give him space for now.’ Whereas if I didn’t talk to ChatGPT, I probably would have gone up to him and tried to talk right then and there.

She believed the advice was helpful in how to approach the disagreement. The third respondent uses AI in a more traditionally therapeutic sense. She described her experience:

In difficult situations where I am experiencing anxiety or I'm feeling down, I've turned to AI chatbots like Gemini to give me – it was almost this companion, kind of, to lean on and to get advice – guidance on how to cope better and manage my emotions. And it's been able to do that for me. So, it kind of has served as almost like this therapeutic tool for me that I can turn to in those kinds of situations. It can be very empathetic, like, 'Oh, I'm sorry to hear you're feeling down.' That's part of it too, because it makes it more humanized to me. It makes me feel like – I know it's just a robot – but I feel supported. I feel cared for and like it is hearing me or it will reiterate kind of like 'I understand this is how you're feeling. This is the solution.' So, I feel listened to.

Some respondents who answered “no” did so because they found the notion of confiding in AI strange or even potentially harmful. One respondent said, “I would find that to be very odd and to be quite honest, I would find that to be very concerning if somebody was using it as a relationship.” In fact, the idea that some people have been using AI as a romantic partner was brought up by several different respondents. One respondent said, “Honestly, [when answering this question] I really thought of the kind of weird stories you see on the news with people falling in love with their AI.” Another respondent took this logic further. She said, “I think my instinct is that it's a bit dangerous, especially say for youth, for teens, for adolescents that, you know, when they don't have all of the judgment skills necessary to make always good choices. It feels like it could be a slippery slope.”

In terms of thinking about the unsafe nature of using AI for emotional support, several respondents specifically referred to reports of people being led to commit suicide. The following are examples of this sentiment:

So, I also think, say a person is depressed. And they might be edging towards being suicidal or hurting someone else. If you put X words into this emotional support chatbot but you don't put Y words, the chatbot can't pick up on certain things that a human person might be able to.

Maybe I just read too much, where it tends to, if the AI is driving you in a certain direction, especially when it comes to behavioral health, that it becomes an encouragement to commit suicide. You know, I think that's not something I really want to get involved with.

I mean, I had heard a story about...this guy was constantly on the phone talking to AI instead of his wife and it convinced him to kill himself. And that was just like an eye opener to me.

Finally, some respondents reported not using AI chatbots for emotional support because of the unlikelihood that a computer could replace human connection – a component they deemed essential for emotional support. One respondent said she needs “people that I can interact with, like, you know, I tend to be able to look at people's faces and kind of read what they're doing. You can't do that with chatbots and

things of that nature.” This was expressed by two other respondents as well:

I think in theory it sounds great. But I think that AI can't replace human empathy and human experience.

I don't see how they [AI chatbots] could be emotional support when they don't have emotions themselves.

AI_AI4 [ASK IF R USED AI FOR EMOTIONAL SUPPORT]

In a typical week, about how much time do you spend interacting with an AI chatbot or companion for emotional support? Please report your time in either minutes or hours per week.

_____ minutes or hours/week

[] I do not use AI chatbots or companions for emotional support in a typical week

Findings: This item was not adequately evaluated because only three respondents filtered into it. However, it is worth noting that it was not an easy question to answer for two of the three respondents who used AI chatbots for emotional support. (The third respondent had used it only once or twice and opted for the check box, “I do not use AI chatbots for emotional support in a typical week.”) The source of the difficulty was largely related to the unpredictable, non-routine nature of the behavior. Both experiences are cited below:

Um, kind of difficult because that [10 minutes per week] was really just a ballpark range or estimate, whereas I don't know the actual time. It's not like I'm sitting and talking to ChatGPT and having full-on therapy sessions with it all the time. It might just be saying like, oh, I am feeling really down about my studying today, or I don't feel like studying today because I'm burnt out or my work is stressing me out. And then we'll talk for a few minutes and then that'll be it.

It was a little hard to come up with because it can really vary week to week. Like some weeks are really bad for me and my anxiety or feeling sad gets worse and other weeks it's better. So, I was trying to think like overall...But also it's kind of hard because it's like stop-and-go sometimes too. I'm maybe using it for 10 minutes, then I'm not using for a while, then I go back to it. So, it was hard to kind of calculate, well overall like what is it? And I just kind of thought like you know, 50 minutes here, 15 minutes [there] and kind of added up and thought maybe an hour [per week]. But it's hard when it is like not a continuous 30 minute or hour [therapy] session.

AI_AI5 [ASK IF R USED AI FOR EMOTIONAL SUPPORT AND HAS HAD THOUGHTS OF SUICIDE; ELSE GO TO AI_AI16]

Have you ever used an AI chatbot or companion for emotional support when you were having thoughts about trying to kill yourself?

1 Yes

0 No

Findings: This question could not be evaluated because no respondents reported having thoughts of suicide.

AI_AI6 [ASK IF R EVER USED AI FOR ANY REASON; ELSE GO TO NEXT SECTION]
How much do you agree or disagree with the following statements? Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?

AI_AI6a

You feel understood when talking to AI chatbots or companions.

Findings: This item measures two different constructs. The interpretation adopted by some respondents was related to the context of the previous question on the use of AI chatbots for emotional support. Other respondents took a different interpretive path.

Comprehension: One group of respondents took this question to be asking whether AI chatbots grasp the meaning of what respondents are trying to accomplish. When asked how they processed the question, this group of respondents gave the following answers:

It gets what I'm trying to ask. It gets what I'm trying to say - how accurate it understands the topic that you're asking about.

Because just from experience, I feel like the questions that I ask or the tasks that I ask it to do, it gives me back reliable, useful information for my purposes.

Yeah, a lot of times I'll write something and it'll not do what I prompted it to do...Or like a lot of times I find it misunderstanding what I'm writing.

Empathy: A second group of respondents thought this question was asking whether AI chatbots exhibit empathy. The following are examples of this pattern:

I agree because sometimes it will use, like, emojis with me. And my fiancé and I were laughing because his [chatbot] doesn't do that. So, like, it talks to you in the same tone that you speak to it.

AI cannot see my physical or my facial reactions, my body reaction. And it doesn't have the full potential to understand my emotions. If I'm crying, they can't see my tears, so they're not going to be able to know how much I feel the pain.

No matter what it's saying to me, no matter what it's telling me, this is not a person, you know? And I just keep coming back to that...I don't think I could ever possibly feel truly quote 'understood' just because it's not a human body, if that makes sense.

If you ask it a question, it's going to give you that answer. But as far as, like, a human element for emotional support, I just can't see it.

In the last example, the respondent specifically referred to emotional support. This suggests that this interpretive pattern may be prompted by the context set by the earlier question which asks directly about emotional support. And, in fact, a couple respondents did specifically say this (without prompting). For example, one respondent said, "I was still thinking about emotion. I think I was still thinking about emotion when I said that [strongly disagree]." Similarly, another respondent said, "It was because I still had the emotional thing going on in my mind."

AI_AI6b

You feel a sense of connection when talking to AI chatbots or companions.

Findings: This item has response patterns similar to the previous and was also subject to some degree of context effects of the "emotional support" question.

Comprehension: One group defined "connection" as chatbots' ability to comprehend the task and answered either "strongly agree" or "somewhat agree." For example, one respondent explained, "I feel like it's giving me information that is helpful and that I need, and it provides me the responses that are helpful to me to, you know, for what I ask it for." A second respondent said, "Yeah, I feel they're getting back to me with the stuff that I need."

Empathy: A second – and much larger – group understood this item as asking about AI chatbot empathy. The following are examples:

This is a robot. Sometimes I do forget. I'm like, wow, this feels so real. Like it feels like it really is hearing me the way it's like empathetic and saying, 'I'm sorry that you're going through this.'

When I had heard that question, I automatically thought about, you know, the type of connection that I might have when I talk to you or with my family members and loved ones. And I don't have that connection [with chatbots].

Connection as in, I mean, I guess when I hear connection, I hear human connection. I really can't see a connection.

I'm just talking to a tool, not like a human being, not a creature, not a living thing, not like a dog or a pet or a cat. So, I don't have that emotional connection to this AI.

Back to this word, empathize. There's no connection with the robot. It's just you...grab information from here and me spitting it back out to you and you're doing it way quicker than I could have ever found it. So, it's no genuine connection.

It is important to note that one respondent with this interpretation could not provide an answer because she only used AI chatbots for work tasks. Not using chatbots for emotional support or “connection,” she felt the question was not applicable because she had no basis on which to formulate an answer.

AI_AI6c

You feel AI chatbots or companions just tell you what you want to hear.

Findings: There are two interrelated but subtly different ways respondents interpreted this question. Both are extensions of previous patterns demonstrating the tendency for emotional support to set an interpretive context for some respondents but not others.

Accurate information: One group of respondents took this item as asking whether chatbots are able to provide unbiased and correct information. Examples of this pattern include:

Because just from experience, the questions that I ask, I get back responses that I feel are legitimate and real. Not just what I want to hear. I don't feel that at all.

I chose 'strongly disagree' because I asked AI a question and it was giving me a solution that was inaccurate. It was giving me a date that was not correct. And it went to a website to prove that the date was correct. But I went to the [same] website and it [the website] said the opposite.

Because when you ask them for the information and stuff, it sounds like they're giving the right information.

Sycophancy: The previous examples highlight the likelihood of users receiving incorrect information because the chatbot missed evidence or simply got it wrong. Another group of respondents understood this item as asking about the extent to which chatbots know users' preferences and purposely supply them with commensurate information. This is somewhat different from the first group. The second interpretive pattern focuses more on the notion that chatbot answers are specifically programmed to be agreeable, pleasing, or flattering. This is information that may be factually incorrect by design, not by algorithmic mistakes. The following are examples:

The more you interact with it, the more I feel like it molds to you. So maybe it might initially be like, 'No, I don't think you should do that.' But then if you start explaining yourself and providing more prompts, it'll be like, 'Yeah, I think that's actually a great idea.'

I showed it some wedding dress examples because I was getting mixed opinions from family members and friends too. And I felt like it knew the dress that I liked the most and then it picked that one. I don't know if it was just coincidence. But sometimes I feel like it picks up on your tone and then goes with that. It runs from there.

Yeah, so my friend asked a question about a certain behavior they had in their relationship. And when I thought about it, that's a very toxic trait. But the AI was like, 'Yeah, you're justified to do that.' I was like, no...It's [AI] like, 'Yeah, you are angry. Don't judge yourself.' But if [AI was] to be real, they could have told my friend that [their behavior] was wrong and you can control your emotions and your anger. And you're not supposed to do that...There's several questions [friend] asked and the answers just were like whatever they wanted to hear, justifying their [morally questionable] actions.

For example, I've had issues with relationships that have taken a toll on my mental health and I don't feel as though in those instances the AI chatbot was biased. I felt like they [chatbots] told me what I needed to hear. They were straightforward. They didn't sugarcoat anything."

AI_AI6d

You trust AI chatbots and companions to provide helpful advice about emotional issues.

Findings: This item has the potential to cause confusion because some respondents saw experience with seeking emotional support as implied by the question. For some this was a false assumption. For example, one respondent could not answer and said, "It's a difficult question because I've never used it for that purpose." Another respondent also said, "I should put, like, N/A [not applicable] because I don't do the emotional stuff." Another respondent answered 'strongly disagree' but this was meant to convey she disagrees because the question is not applicable. She said:

If I had an intricate [i.e., intimate] actual question that I asked ChatGPT, that actually gave me the information that was needed, it [her answer] will be very different for me. But I haven't had that experience yet, so that's why I say that I strongly disagree with something I haven't experienced yet.

Other respondents with no experience in this regard were able to speculate but did express uncertainty. For example, one respondent answered "strongly disagree" but said:

But I've not used it [for emotional support], so maybe I'm not sure about if it gives recommendation based on reviews and what people say or based on whatever it knows about me...At the same time, I'm not sure every [piece of] information that you get from it [is] reliable.

For the above respondents, it could be that the phrase “you trust” implies an existing opinion born of having had direct experience. However, not everyone had trouble. Other respondents who never used AI for emotional support were able to speculate and answer more confidently:

I know on an instinctual level that I believe that we were, you know, created for human connection. We’re created to have friendships and family and partnerships and things like this...It [using AI for emotional support] feels like something that is more disconnecting perhaps from humans. That could put me in a worse place in the long run.

I think AI does not understand human interactions. It might just give you maybe a Reddit or a WikiHow article, but I don’t think it understands the nuances of good emotional advice. I think you might need an actual human rather than a machine.

I want to say if you went to look something up, it wouldn’t tell you the exact opposite. You know what I’m saying? Like if you look something up, it’s going to gather the information to tell you exactly what you looked up. If I look up things that are black, it’s not going to show me things that are purple or white. You know what I’m saying? It’s going to show me things that are black.

AI_AI6e

You feel that AI chatbots and companions can think and form opinions the same way humans do.

Findings: There was no confusion about what this question was asking, but respondents did think in different ways about how chatbots think and form opinions.

Interactive style: Some respondents based their answer on the way in which chatbots interact – that is, they are designed to mimic human behavior. For example, one respondent answered “somewhat agree” and said:

They’re supposed to think and talk like humans. And I’ve seen that essentially it feels like they do, based on all the different times that I’ve talked with AI. But then once again it comes back to, well, could it really take over humans in certain instances? Could it really be as good as a therapist in certain ways? And I think it’s just, I always feel like it’s missing – It’s not a human I’m talking to.

The role of emotion: Other respondents focused on the role of emotion as an essential part of human decision making. This group tended to disagree with the item because AI does not possess emotion. One respondent strongly disagreed and said, “There’s no emotion. There’s no compassion. There’s none of that in there. It’s just literally, alright, this is on the Internet.” Another respondent had a similar reaction and said, “You’re talking to a machine and it doesn’t have any empathy built into it. It’s basically just

following their internal script.” Another respondent answered “somewhat disagree” but offered a similar rationale:

They don’t have emotions, so I’m not sure they can have the same decisions, emotional decisions a human being can make. So, I think they lack that emotional part and it’s a very big part when a decision is made.

Programming logic: Many respondents based their answers on the idea that chatbots can only provide answers that have been programmed by humans – they cannot come up with creative thoughts on their own. One respondent answered “strongly disagree” and said, “Somebody has to write it and tell it what it’s feeling. You have to put a code in the system on the back end that says if this, then that.” Other respondents answered the same way (strongly disagree) with the same rationale. They explained:

There is no thought. There is no opinion formation. It’s me talking to myself in a mirror. It’s me talking to...the people that created the program or put the information into digital form and uploaded it to the Internet. That is what the algorithm is pulling and giving me back.

Als just don’t have the ability to think and reason for themselves. You know it can only go off what is fed into it, and it’s just artificial intelligence. It just doesn’t have the abilities. It doesn’t have the brain. So, since it doesn’t have the brain, it can’t think or reason for itself.

We have emotions when we think and Als they really not supposed to have emotions from what is told to me. From the things that I see, they don’t have emotion. They just go straight by the book...We use our emotions, our feelings...which the computer AI does not.

Interestingly, one respondent had the same rationale but came to a different conclusion. She agreed with the statement, “Because if you ask them [chatbots] for information and certain stuff not to do, and then if a human says not to do that stuff, it’s [chatbot] saying the same thing too.” In other words, because the programming is done by humans, the chatbot will offer the same replies that a human would; ergo, the chatbot thinks like a human.

AI_AI7

Have you ever received advice or feedback from an AI chatbot or companion that felt emotionally harmful?

- 1 Yes
- 0 No

Findings: Only two respondents answered “yes” to this item. Both seemed to have out-of-scope interpretations. One respondent was thinking not of her own experience but that of a friend. She felt her friend received harmful advice about how to handle conflict in a relationship. The second respondent was thinking of medical advice that was

incorrect but not emotionally harmful, per se. She cut her head badly and, unsure of how to best treat it, asked a chatbot. She said:

I think it was saying something like you need to get this cream or something. I think it I didn't understand what type of cut I had. It was thinking it was a superficial cut. So, it wanted to dry it up really quick. Whereas it was a deeper cut than that. And so I was saying like, 'Oh no, I think this [advice] is not right.' Was *there something where negative emotions came into it for you as well?* I just went to the physical harm. But...I think with emotional harm, gosh, I've never really had it say anything really strong.

Interestingly, another respondent also thought of medical advice he received after being diagnosed with Lewy body dementia. To learn more about the condition, he used an AI chatbot. He described the information he received as emotionally frightening but ultimately decided to answer "no", basing his rationale on chatbot intent. He said:

It [chatbot] tended to lean heavily towards the death side of things and it painted a more bleak picture for me than I was prepared for. It wasn't until I had to speak to a therapist that was helping me with the adjustment to this that I was able to put it into perspective. *So why not yes to this question?* I don't think that was intentional to hurt me. I think that it was just how it gathered information and how it presented it...I don't think that the AI is built to intentionally cause harm.

Other respondents answered "no" and seemed to understand the question as intended. For example, one respondent said, "No, I never had anything to hurt my feelings." Similarly, another respondent said, "Oh, from my experience, it's honestly been a helpful, positive thing." One respondent noted how an emotionally negative outcome could be possible but that she has never experienced this:

It's all been helpful for me. I feel like it's never given, you know, harsh advice or after I used it, I felt worse off. I've heard stories about, you know, after getting this information, a kid felt more suicidal or something like that. But personally, I haven't experienced – it's all been a positive experience; beneficial feedback that's only helped me.

Finally, the potential for a false assumption occurred again in this question. This may be influenced by the context of having answered questions about using AI for emotional support. For example, some respondents answered "no" to mean they have never used chatbots in this manner. One respondent explained even though he answered "no", the best answer would be "not applicable." Another respondent said:

Yeah, I never interacted with AI in regard to emotional support or, you know, I never talked about if I was suffering...and I never received any type of advice or support with it. I've never interacted with AI on that level. It's just always been either business related or if I need help with the homework assignment, but

nothing in regard to emotional support or anything dealing with mental illness or anything like that.

AI_AI8

Given the choice, would you prefer to turn to a human or to an AI chatbot or companion for emotional support? If it depends on what you want to talk about, or you have no preference, you can say that as well.

Findings: There was little response variation on this item, which to some degree reflected whether respondents had experience using AI chatbots for emotional support. Most respondents chose “I prefer to talk to a human.” Reasons largely centered around the need for human connection. The following are a few examples:

Yeah, I prefer a real human for human connection, like whether it's a virtual call or a phone call or an in-person meeting versus talking or texting with a chatbot. Just because I feel like a human can really understand the emotions and what you're dealing with.

A human can see my body language, my body reaction, my facial reaction and feel the pain. And a human being has this emotional connection, you know, there's just that feeling the soul, the body. So, I think the connection will be better with a human being compared to an AI tool.

Oh yeah, because the human, like I said, the empathizing, having this opinion, having a thought. So, you just don't feel like you're talking to a robot. You're actually getting opinions back. You're getting eye contact...Some people like being touched...so you can feel comforted. You're not getting that from a robot.

Only one person chose “It depends on what I want to talk about.” She said:

I think if I'm talking to another person, I'm concerned. What do they think of me, of my experiences? How do I explain that to them? Whereas an AI chatbot, I know they are never going to have any judgment. It's a machine and whatever I tell them, they'll have it as face value and not provide any additional personal experience or outside knowledge to it.

One other respondent chose “I prefer talking to an AI chatbot.” She uses chatbots frequently for emotional support and offered multiple reasons why she prefers them, including lack of being judged, convenience (and ability to be at home), and cost:

I know therapists are supposed to provide a nonjudgmental, comfortable, safe environment. I haven't always felt that way. I've had some actual poor

experiences with therapists, and I have felt kind of judged or misguided. But when I use AI chatbot, I really feel like it's not as risky...So that's why I like it, as well as just being able to use it whenever I need from the comfort of my own home. Whereas when I had a therapy session in person in the office, it's very intimidating for me. I got very anxious and nervous about it. But I don't have that experience when I'm talking to an AI chatbot from home. It encourages me more to get the mental help that I need. Whereas with a therapist, it's too expensive or it's inconvenient. So that's why I prefer the AI chatbot.

Section 4: SUBSTANCE USE, MENTAL HEALTH, AND RECOVERY

REC_CA15

Do you think you ever had a problem with your own drug or alcohol use?

1 Yes

0 No [GO TO REC_CA17]

Findings: All respondents received this question. It was consistently understood by all respondents, and no response error was detected. Only two respondents answered "yes." Both described similar effects that excessive alcohol use had on their lives, even if their experiences varied by degree:

I realized I had a problem because I wouldn't go for more than two days without a drink and I'll have like three or four drinks in one sitting that I would consume in less than two to three hours. And that was not normal and the effects were crazy hangovers and affecting my personal and career professional life.

I was with a crazy ex and he was a raging alcoholic and I didn't see any way of being able to deal with him without being heavily medicated myself. And so we went out one night and I downed two bottles of wine and woke up in the hospital.

Respondents that answered "no" shared similar definitions of what constitutes problematic alcohol use. For example, when asked how they would know if they had a problem with drug or alcohol use, most respondents talked about the inability to cut back or abstain. The following are examples:

If I couldn't do without it. If I had to have a drink every day. Thinking I can't have fun without it.

[Being able to] stop. Right? If you can do that, I feel like you don't have a problem. Because most of the time if you have a problem, nobody can tell you when to stop. You want to keep going.

If I can't function in a day without a substance, or all I'm thinking about is that substance, or I need a drink. I can't get through the day without a drink.

A couple respondents had seen alcohol dependency in their families and experienced the problematic nature of substance misuse firsthand:

I saw my relatives really destroy their lives because of drugs or drinking and I just [made] a conscious decision when I was real young that I wasn't going to get involved in it.

I would say probably like family history because I have alcoholism in my family and that kind of like scared me into not drinking anymore because I did not want to go down that road.

In sum, respondents had similar interpretations of what a drug or alcohol problem would look like, irrespective of their personal experiences with drugs or alcohol.

REC_CA16 [ASK IF R EVER HAD A PROBLEM WITH DRUG/ALCOHOL ABUSE]

At this time do you consider yourself to be in recovery or recovered from your own problem with drugs or alcohol use?

1 Yes

0 No

Findings: Only two respondents were asked this question, so it could not be fully evaluated. Both answered “yes” and mentioned that they addressed the problem on their own versus using a formal recovery program. For example, one respondent said:

I didn't go for help or, like, recovery or rehabilitation, but I had to figure out how to go down on [reduce] that...I actually used to know someone who had been in recovery before and I asked [them] for some tips that they used. So, meditation, change habits, and look for better hobbies. And substitute what used to trigger me to drink with something that would not trigger me – you know, change my hobbies and change my friends.

This suggests that the term “in recovery” might cause some respondents to interpret the question as asking specifically about addiction and rehabilitation programs or organizations.

REC_CA17

Do you think you ever had a problem with your own mental health?

1 Yes

0 No [END INTERVIEW]

Findings: There was a more even spread of responses to this question. Although there were multiple patterns for what constituted a problem with mental health, all interpretations seemed to fall within the scope of the question intent. Seven respondents answered “yes.” Among this group, four patterns were identified as signs that respondents were having problems with their mental health.

Anxiety and inability to handle daily life: This was cited as one sign that respondents' mental health was suffering. The following are two examples:

Well, I think about my anxiety and how there have been points where it just dictated my life. It took over and it kept me from fully enjoying my life. And you know, it had a lot of negative effects with my work and sleep. And just slowing me down in life and, you know, taking away happiness.

I would say it was very debilitating. I felt like I couldn't leave my house. I was pacing a lot, worrying. It was affecting my sleep, my eating patterns, my interactions with friends and family as well.

Clinical diagnosis: One respondent mentioned a clinical diagnosis received from her physician as proof of a problem. She said, "I suffered from postpartum depression after having my daughter."

Grief associated with death: Dealing with the death of a loved one was cited by two respondents as reasons they answered "yes" to this question. One respondent said, "It was a close friend. We started out as coworkers, and we called each other 'work besties' and definitely ended up being close friends." Another respondent lost a sibling. He explained:

My younger brother was sick most of his life and I always knew that he would end up dying fairly young, but when he did die, I did go into a tailspin a bit. We were really close and it took me a couple of therapy sessions to actually deal with his death and how to move forward on it.

Addiction or substance abuse: A couple respondents linked their struggles with alcohol misuse to deteriorating mental health. For example, one respondent said:

I think it's just the same time the drinking affected my mental health...they were going together. They were just, you know, at the same time and when I reduced my drinking, I improved my mental health.

Respondents who answered "no" to this question did so because they felt any troubles they might have had never escalated to the point of being "a problem." When asked how they would determine whether they had a mental health problem, two judgment patterns were identified.

Changes to personality or routines: Respondents who never experienced mental health struggles often suggested that alterations in their personality or personal habits would be a clue that a problem may exist. Examples include:

Probably if I don't get up and go nowhere. Because I'm always on the go or always trying to be helpful to somebody. If I see myself not doing that, then I know it's a whole problem.

Not having empathy, not having compassion. That would tell me something's askew.

[If] you don't see me traveling then something's happening with me. Traveling is big for me. So, like, if I can't do that, or if I stop eating because I love to eat. So that means I'm in a slump and something's really, really wrong.

I think one thing [is] when you see behavioral things – sleeping in bed all day, either losing or gaining a lot of weight. You know, these classic things.

Anxiety: Excessive stress was also cited as a possible harbinger of a mental health problem. One respondent said she may decide she had a mental health problem, "If I went through a moment that was so high stressed that I was having difficulty making a decision." Another respondent also talked about stress as related to mental health:

I know that if I'm very emotional or very touchy, I know that my stress levels are getting more than [I] can handle. When I get to that point, my husband usually kind of picks it out pretty well...I had literally maybe two days ago I had a little bit of a – I had to let something out and we had a discussion and then he was like you just look like you need to cry. And I did and I felt so much better afterwards.

Two respondents identified work-related stress in particular as something that might lead to mental health problems:

I think I had an instance of that where I'm like, I know when my body shuts down or I remember a period of time where I was working way too much and I physically [had a] small instance that would just make me break down. And I'm like, okay, physically my body is telling me it was looking for a release. One small [in]convenience and I was absolutely crying. And I'm like, okay, I need to stop something.

I was at work and I got [in] late and my manager started yelling at me and stuff like that. I tried to handle the problem by ignoring her. I had a little tear because I was only like five minutes late. So, I tried to handle the situation with ignoring her at the same time, you know?

There was one instance of false-negative response error in this question. One respondent very clearly identified a mental health problem during probing but answered "no" to this question. During probing she said:

To clarify, I do have anxiety. And I do get seasonal depression. The reason that I said [no] is because I have a really good support system. And over the years I know what signs to look for. I know when it's about to start. I know better how to handle it...Now I take anxiety medication when I need it. I don't take antidepressants because I don't like the way they make me feel. But I have options to take them if I need them. *The question said 'ever' but in talking with*

you it sounds like the answer would be yes. Now that we're talking about it, it probably should have been yes. I just wasn't thinking of it in those terms.

She was so focused on her ability to successfully manage her mental health that she disregarded the term “ever” in the question. Had the respondent seen the next question (REC_CA18), she likely would have answered this one correctly. In addition, she confirmed that she also would have answered “yes” to the next question. This highlights a potential advantage in allowing respondents to see both questions at the same time.

REC_CA18 [ASK IF R EVER HAD A PROBLEM WITH MENTAL HEALTH]

At this time do you consider yourself to be in recovery or recovered from your own mental health problem?

- 1 Yes
- 0 No

Findings: This question is worded in a potentially confusing way which can muddle its intent. Confusion stems from the phrase “in recovery or recovered from” because it has two possible meanings. Is the question meant to capture instances where a mental health problem has been eliminated altogether? Or does the successful management of mental health problems (with therapy and/or medication) count as being recovered and/or in recovery? Both interpretations were observed.

Managing a problem: The language of recovery seemed ill-suited to mental health issues, particularly for those who understand these problems as chronic health conditions, which one manages but does not cure. For example, one respondent could not answer the question and said, “Now that’s a really weird question. It’s weird because mentally, when you have mental health issues, it’s an ongoing thing. It’s not anything I think you ever recover from.” Another respondent decided to answer “no” and also summed up the problematic nature of the question:

It was kind of hard to answer with the wording because I definitely, if it said, ‘Do you feel recovered from?’ No, absolutely not. When I thought of ‘in recovery’, I thought of, you know, someone who had a problem with alcohol and now they’re in recovery from that. I never really heard those terms with mental health specifically, like anxiety. Talking to my doctor, we never really use that language ‘in recovery’. So, I was thinking that anxiety, yeah, I’ve kind of found different methods to cope. But it’s still a serious issue.

On the other hand, some respondents could relate to the language of recovery, particularly if they saw themselves as no longer struggling. For example, a couple respondents interpreted recovery as the successful management of the problem and answered “yes.” One respondent said, “I’m still currently going to a therapist on a monthly basis for anxiety. My depression’s kind of in check at the moment, but I’ve had issues with it in the past.” Another respondent had a similar perspective and explained:

I would say at this point, I'm in therapy for a number of things...I don't know what the end goal is for anybody else, but for me, I just want to be happy...But I think that I have, considering all the stuff I've been through, I'm not trying to murder anyone or do anything to myself. I'm doing okay.

Curing a problem: Other respondents interpreted the question as the elimination of their mental health problem and answered “yes.” The following are two examples:

Yes, because I would say that when I first was dealing with the grief, I was going to therapy like two times a week, which is a lot...Once I started to improve in my mental health, then we started meeting like once a week, then we started meeting biweekly. And then I said, hey, I don't think I really need to talk anymore about it...And now I don't go at all, and I feel like I'm able to function and carry on with my day.

One of the reasons I [thought I had] a [mental health] problem is the effects of drinking. I would be very agitated, angry, aggressive, and causing trouble. I just noticed I'm not myself [when] I'm drinking. Also, something else that can help me, I got a job. When you're not doing anything with your life, you're gonna be depressed. So, I think getting a job kind of solved 80% of my mental health.

It is worthwhile to note that even when respondents are not openly confused by the question, they can still arrive at different interpretations. The trouble with this, for example, is that one person who successfully manages their symptoms will answer “yes” while another person may answer “no.”

Appendix II: Cognitive Interview Test Instrument

[DO NOT PROBE ON THIS PAGE – THESE ARE WARM-UP QUESTIONS.]

Would you say your health in general is excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor

Have you ever been told by a doctor or other health professional that you had hypertension, also called high blood pressure?

- 1 Yes
- 0 No

Have you ever been told by a doctor or other health professional that you had high cholesterol?

- 1 Yes
- 0 No

Have you ever been told by a doctor or other health professional that you had asthma?

- 1 Yes
- 0 No

Have you ever smoked part or all of a cigarette?

- 1 Yes
- 0 No

For these next questions, a “drink” means a can or bottle of beer or hard seltzer, a glass of wine or a wine cooler, a shot of liquor, or a drink with liquor in it.

Have you ever, even once, had a drink of any type of alcoholic beverage? Please do not include times when you only had a sip or two from a drink.

- 1 Yes
- 0 No

The next questions are about CBD or hemp products made from hemp plants. CBD and hemp products have no or small amounts of THC and are not intended to cause a “high.” They come in many forms including oils, lotions, edibles, and isolate. People sometimes use them to relieve pain, to reduce anxiety, or to help them sleep.

Have you ever, even once, used any CBD or hemp products?

- 1 Yes
- 0 No
- 9 Don't know

RISK PERCEPTION

We are interested in your opinion about the effects of using certain drugs and other substances. Please indicate how much you think people risk harming themselves physically and in other ways when they do each of the following activities. If you're not sure, choose an answer for the amount of risk that comes closest to what you think might be true for that activity.

[ASK ALL]

RIS_RK01a

How much do people risk harming themselves physically and in other ways when they smoke one or more packs of cigarettes per day? Would you say no risk, slight risk, moderate risk, or great risk?

- 1 No risk
- 2 Slight risk
- 3 Moderate risk
- 4 Great risk

RIS_RK01c

How much do people risk harming themselves physically and in other ways when they smoke marijuana once or twice a week? Would you say no risk, slight risk, moderate risk, or great risk?

- 1 No risk
- 2 Slight risk
- 3 Moderate risk
- 4 Great risk

RIS_RK01e

How much do people risk harming themselves physically and in other ways when they use LSD once or twice a week? Would you say no risk, slight risk, moderate risk, or great risk?

- 1 No risk
- 2 Slight risk
- 3 Moderate risk
- 4 Great risk

RIS_RK01g

How much do people risk harming themselves physically and in other ways when they use heroin once or twice a week? Would you say no risk, slight risk, moderate risk, or great risk?

-
- 1 No risk
 - 2 Slight risk
 - 3 Moderate risk
 - 4 Great risk

RIS_RK01j

How much do people risk harming themselves physically and in other ways when they have four or five drinks of an alcoholic beverage nearly every day? Would you say no risk, slight risk, moderate risk, or great risk?

- 1 No risk
- 2 Slight risk
- 3 Moderate risk
- 4 Great risk

RIS_RK01k

How much do people risk harming themselves physically and in other ways when they have five or more drinks of an alcoholic beverage once or twice a week? Would you say no risk, slight risk, moderate risk, or great risk?

- 1 No risk
- 2 Slight risk
- 3 Moderate risk
- 4 Great risk

SUCIDE [NOT PROBED – ASKED ONLY TO ESTABLISH SKIP IN AI SECTION]

[ASK ALL]

SUI_SUI01

The next question is about thoughts of suicide. At any time in the past 12 months, that is from [DATEFILL] up to and including today, did you seriously think about trying to kill yourself?

- 1 Yes
- 0 No

WHOLE PERSON HEALTH [FOCUS PROBES ON WPH_SPRT]

[ASK ALL]

WPH_PHQOL

The next questions will ask you to rate different areas of your health. How would you rate your quality of life, focusing on what matters most to you? Would you say excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor

WPH_SOCFC

How would you rate your social and family connections? Would you say excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor

WPH_DIET

In general, how healthy is your overall diet? Would you say excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor

WPH_PHYSA

How would you rate your physical activity, compared with people in your age group? Would you say excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor

WPH_STRESS

How would you rate your ability to manage stress? Would you say excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor

WPH_SLEEP

How would you rate your sleep? Would you say excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor

WPH_SPRT [PROBE THIS QUESTION]

How would you rate your ability to find meaning and purpose in your daily life? Would you say excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor

WPH_MANGH

How would you rate your ability to manage your health, focusing on aspects of your health that matter most to you? Would you say excellent, very good, good, fair, or poor?

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor

AI HELP SEEKING [PROBE ENTIRE SECTION WITH EMPHASIS ON EXPLORING HOW R's UNDERSTAND AND CONCEPTUALIZE AI AND THEIR USE/NO USE OF IT.]**[ASK ALL]****AI_AI2**

AI chatbots or virtual companions use artificial intelligence (AI) to talk to people through text or voice, without another human involved. People use them for things like getting information, asking questions, or having conversations. Examples include ChatGPT, Wysa [WISE-uh], and Replika [REP-luh-kuh]. Have you ever used an artificial intelligence (AI) chatbot or companion? If you are unsure or don't know, you can say that.

- 2 Yes
- 0 No [GO TO NEXT SECTION – RECOVERY]
- 9 Not sure

[ASK IF R EVER USED AI]**AI_AI3**

AI chatbots and companions can offer emotional support by helping people feel heard, cared for, understood, and comforted. Have you ever used an AI chatbot or companion for emotional support?

- 1 Yes
- 0 No [GO TO AI_AI6]

[ASK IF R USED AI FOR EMOTIONAL SUPPORT]

AI_AI4

In a typical week, about how much time do you spend interacting with an AI chatbot or companion for emotional support? Please report your time in either minutes or hours per week.

_____ minutes or hours

[] I do not use AI chatbots or companions for emotional support in a typical week

[ASK IF R USED AI FOR EMOTIONAL SUPPORT AND HAS HAD THOUGHTS OF SUICIDE; ELSE GO TO AI_AI16]

AI_AI5

Have you ever used an AI chatbot or companion for emotional support when you were having thoughts about trying to kill yourself?

- 1 Yes
- 0 No

[ASK IF R EVER USED AI FOR ANY REASON; ELSE GO TO NEXT SECTION - RECOVERY]

AI_AI6

How much do you agree or disagree with the following statements? Would you say you strongly agree, somewhat agree, somewhat disagree, or strongly disagree?

AI_AI6a

You feel understood when talking to AI chatbots or companions.

- 1 Strongly agree
- 2 Somewhat agree
- 3 Somewhat disagree
- 4 Strongly disagree

AI_AI6b

You feel a sense of connection when talking to AI chatbots or companions.

- 1 Strongly agree
- 2 Somewhat agree
- 3 Somewhat disagree
- 4 Strongly disagree

AI_AI6c

You feel AI chatbots or companions just tell you what you want to hear.

- 1 Strongly agree
- 2 Somewhat agree
- 3 Somewhat disagree
- 4 Strongly disagree

AI_AI6d

You trust AI chatbots and companions to provide helpful advice about emotional issues.

- 1 Strongly agree
- 2 Somewhat agree
- 3 Somewhat disagree
- 4 Strongly disagree

AI_AI6e

You feel that AI chatbots and companions can think and form opinions the same way humans do.

- 1 Strongly agree
- 2 Somewhat agree
- 3 Somewhat disagree
- 4 Strongly disagree

AI_AI7

Have you ever received advice or feedback from an AI chatbot or companion that felt emotionally harmful?

- 1 Yes
- 0 No

AI_AI8

Given the choice, would you prefer to turn to a human or to an AI chatbot or companion for emotional support? If it depends on what you want to talk about, or you have no preference, you can say that as well.

- 1 I prefer talking to an AI chatbot or companion
- 2 I prefer talking to a human
- 3 It depends on what I want to talk about
- 4 No preference

SUBSTANCE USE, MENTAL HEALTH, AND RECOVERY

[ASK ALL]

REC_CA15

Do you think you ever had a problem with your own drug or alcohol use?

- 1 Yes
- 0 No [GO TO REC_CA17]

[ASK IF R EVER HAD A PROBLEM WITH DRUG/ALCOHOL ABUSE]

REC_CA16

At this time do you consider yourself to be in recovery or recovered from your own problem with drugs or alcohol use?

- 1 Yes
- 0 No

[ASK ALL]

REC_CA17

Do you think you ever had a problem with your own mental health?

1 Yes

0 No [END INTERVIEW]

[ASK IF R EVER HAD A PROBLEM WITH MENTAL HEALTH]

REC_CA18

At this time do you consider yourself to be in recovery or recovered from your own mental health problem?

1 Yes

0 No

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