Psychotherapy access barriers and interest in internet-based mental health interventions: Survey of adults with treatment need

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Abstract

Background: Low-intensity treatments (LITs) such as digital mental health interventions, internet-based cognitive behavioral therapy (i-CBT), and guided self-help (GSH) may be a promising way to reduce the public health burden of mental illness. These interventions are efficacious, can provide evidence-based treatment at low cost, and may circumvent structural barriers (e.g., cost) to traditional psychotherapy (i.e., individual face-to-face treatment with professional providers). There is great excitement regarding the resulting potential of LITs to expand treatment access to those currently facing structural barriers. However, this claim relies upon the largely untested assumption that individuals who cannot or do not access psychotherapy want and would use LITs, often without consideration of the influence of attitudinal barriers to psychotherapy access, which at least equally as common as structural barriers.

Objective: The current study evaluates the assumption that LITs will reach individuals with unmet treatment needs by circumventing structural barriers. We investigated the relationship between 1) structural barriers to traditional psychotherapy access and 2) attitudinal barriers to traditional psychotherapy access with indicators of potential GSH use.

Methods: We collected survey data from N=971 U.S. adults who were recruited online via Prolific and screened for the presence of internalizing distress. Participants provided information about demographic characteristics, current symptoms, and use of psychotherapy in the past year. Those without past-year psychotherapy use answered questions about perceived barriers to psychotherapy access, selecting all contributing barriers to not using psychotherapy and a primary barrier. All participants also read detailed information about a GSH intervention. Primary outcomes were participants' self-reported interest in the GSH intervention and self-reported likelihood of using the intervention if it were offered to them.

Results: Individuals who had used psychotherapy in the past year had much greater interest in GSH than those who had not (OR=2.38; 95% CI 1.86, 3.06; P<.001) and much greater self-reported likelihood of using GSH (OR=2.25; 95% CI 1.71, 2.96; P<.001). Among those without past-year psychotherapy use, the most commonly reported barriers were lack of perceived need for treatment (206/640, 32.19%) and issues with money or insurance (170/640, 26.56%). When participants' primary barriers to psychotherapy access were sorted into categories, attitudinal primary barriers (e.g., lack of perceived need, wanting to handle the problem on one's own; 336/640, 52.5%) were more common than structural primary barriers (e.g., money or insurance, lacking transportation; 244/640, 38.12%). Relative to endorsing a structural primary barrier, endorsing an attitudinal primary barrier was associated with lower interest in GSH (OR=0.44; 95% CI 0.32, 0.6) and lower self-reported likelihood of using GSH (OR=0.61; 95% CI 0.43, 0.87).

Conclusions: Our findings suggest that attitudinal barriers to traditional psychotherapy use may also serve as barriers to LIT use, challenging assumptions about the potential of LITs to expand treatment access by circumventing structural barriers alone. Future research should seek to further understand attitudinal barriers to LIT access, their relationship with barriers to traditional psychotherapy access, and potential LIT design adaptations and dissemination strategies that might counter these barriers.

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Conclusions: Our findings suggest that attitudinal barriers to traditional psychotherapy use may also serve as barriers to LIT use, challenging assumptions about the potential of LITs to expand treatment access by circumventing structural barriers alone. Future research should seek to further understand attitudinal barriers to LIT access, their relationship with barriers to traditional psychotherapy access, and potential LIT design adaptations and dissemination strategies that might counter these barriers.

Keywords: psychotherapy; internet-based CBT; internet-based interventions; low-intensity treatment; guided self-help; public health; treatment access barriers; digital mental health; treatment attitudes

Introduction

Over 50 million Americans struggle with their mental health [1], but less than half receive mental health treatment [2], and only 16% receive minimally adequate psychological interventions [3]. Individuals with common mental illnesses face many barriers to adequate care, including limited numbers of licensed providers, geographical barriers due to therapists living mostly in urban areas, and an inability to pay or use insurance [4]. In recent years, there has been an increasing interest in the potential of internet-delivered and low-resource psychological treatments (e.g., bibliotherapy) to provide treatment remotely for low cost, such that they can be disseminated at a larger scale than traditional treatments [5]. These low-intensity treatments (LITs) may have the potential to expand access to psychological treatment [6] and have garnered much attention in psychotherapy research and the private sector [7-8].

Research has established that many LITs are efficacious [e.g., 9-10], but less research focuses on evaluating the potential reach of LITs. It is assumed that LITs can reach a larger population than traditional psychotherapies because they may circumvent *structural barriers* (e.g., cost, location, need for transportation, time commitment) to traditional psychotherapy access. However, this promise relies upon the assumption that individuals with unmet treatment needs are broadly *interested in* and *would use* LITs. There are reasons to question this assumption. For example, although *structural barriers* (e.g., cost, location, need for transportation, time commitment) limit psychotherapy access, *attitudinal barriers* are at least equally common [11-13]. Among individuals with a 12-month mental disorder diagnosis, only 38% reported a perceived need for treatment, making low perceived the most common barriers to treatment utilization [11]. Other common attitudinal barriers include beliefs about the effectiveness of psychotherapy, preferring to handle a problem alone, and stigma. Although barriers may differ between LITs and more traditional services, it is possible that attitudinal barriers that limit use of traditional psychotherapy may also limit use of LITs.

In addition to hopes that LITs may expand treatment access in the general population, there is also an often-stated assumption that LITs have the potential to reduce racial and socioeconomic disparities in access to mental healthcare [14-16]. Mental healthcare disparities in the United States are a major public health problem and social justice issue. For example, in 2012, the rate of access to mental healthcare for non-Hispanic White Americans was 20%, whereas the rates for Black, Hispanic, and Asian Americans were 10%, 9%, and 5%, respectively [17]. It is often assumed that LITs will reduce health disparities because reducing structural barriers will make these interventions more accessible for low-income and minoritized racial-ethnic groups. Some research suggests that racial-ethnic minoritized adults may be more interested in LITs than non-Hispanic White adults [15, 18-20]. However, some literature suggests that lower-income individuals andcertain racial-ethnic minorities may face greater attitudinal barriers to traditional psychotherapy relative to higher-income individuals and non-Hispanic Whites, such as lower perceived need in Asians and Latinos [21-22] and unique cultural beliefs across different immigrant groups [23]. If attitudinal barriers to traditional psychotherapy generalize to LITs, this might limit LITs' reach in minoritized populations. Unfortunately, individuals from these groups are often excluded from LIT development research, such that their preferences and attitudes may be overlooked in the design of LITs' delivery and content [15,24]. Neglecting to understand marginalized groups' actual interest in LITs may limit the potential of LITs to attract members of these groups and serve their mental health needs [14-15,25].

Aims

The LIT literature often includes untested assumptions about the potential of LITs to expand treatment access. We explored these assumptions in a sample of participants with internalizing distress (K6≥5), indicating high potential for treatment need. We investigated past-year psychotherapy use and perceived barriers to psychotherapy as predictors of interest in guided self-help (GSH) and participants' own predictions about their likelihood of using GSH. Capturing both

participants' *interest* in GSH and self-reports of their likelihood of *using* it allowed us to parse the appeal of the intervention from its actual potential to engage participants. Research applying the theory of planned behavior [26] supports the use of behavioral intentions as a reliable predictor of mental health help-seeking [27], and behavioral estimates may be an even stronger predictor than intentions [28].

Methods

Ethics Approval

Study procedures were approved by the institution's Human Subjects & Institutional Review Board (IRB #14172).

Participants and Procedure

Participants were U.S. adults recruited via the online crowdsourcing data collection platform Prolific (accessed 7/25/22-7/26/22) [29] who reported internalizing distress (Kessler Psychological Distress Scale (K6)≥5 see *Measures*) [30]. They completed a battery of questionnaires covering demographic characteristics, personality, psychopathology, and related characteristics. Participants were provided information regarding a transdiagnostic GSH, Doing What Matters in Times of Stress (DWM), a guided bibliotherapy intervention developed by the World Health Organization [31] focusing on principles of acceptance and commitment therapy (ACT) [32] skills. Recent work suggested that online GSH delivery of DWM via virtual meetings with intervention "coaches" is acceptable and effective for adults with internalizing distress [33-34]. Participants were then asked to predict their likelihood of using the DWM intervention in the following series of questions:

1. First, Prolific participants were shown the advertisement used in our laboratory's recruitment for a DWM trial. They were asked if they believe that they would click on the ad and complete a 15-minute survey if they saw it on social media ("Do you think you would click on the link in the ad…";

"Most likely yes" or "Most likely no").

2. Those who answered "Most likely yes" to the above question were asked if they believed that they would then answer a phone call from a researcher and stay on the phone for approximately thirty minutes ("Do you think you would answer the call…"; "Most likely yes" or "Most likely no").

3. Those who answered "Most likely yes" to the phone call question were provided information about the trial. Participants then answered comprehension questions regarding the information they had just read and were asked to read again if they answered any of these questions incorrectly. Participants who were asked to read a second time were shown the same comprehension questions again, and those who answered more than one question wrong were removed from the sample prior to analyses.

After learning the information typically shared in the trial's welcome call, participants were asked if they believed they would be likely to enroll in the intervention portion of the trial ("Do you think you would sign up for the treatment?"; "Most likely yes" or "Most likely no").

4. Those who answered "Most likely yes" were asked how many GSH sessions they believe they would attend ("How long do you think you would most likely stay in the treatment (how many weeks of calls with the coach do you think you would do)?"; "I would probably not attend any of the sessions" or "I would probably do the first few calls with the coach (1 to 2 weeks) but not finish all the ones I scheduled" or "I would probably do all the calls with the coach that I signed up for (3 to 6 weeks)").

Measures and Variables

Internalizing Distress

Internalizing distress was measured via the Kessler 6 Psychological Distress Scale [30], a six-item measure assessing frequency of emotional distress (e.g., nervousness) over the past 30 days, where

higher scores indicate greater distress. The K6 is a reliable and valid measure of distress [35-36] which has been reported to have excellent internal consistency in prior work (Cronbach α=0.89) [37], and appeared internally consistent in the current study (ω= 0.79). The K6 can be used to screen for both serious mental illness at a score of 13 or over [30] and milder forms of emotional distress with lower scores [38]. While investigators differ in describing the lower cut-offs as mild, moderate, or mild-moderate, evidence generally supports the interpretation of a score greater than 5 on the K6 as indicating at least mild mental health needs [33-34,38]. Internalizing distress was included in analyses of demographic characteristics.

Demographic Characteristics

Participants answered questions about age, race, ethnicity, gender, sex, sexual orientation, income, education level, relationship status, and employment status (see Table 1).

Past-Year Psychotherapy Use

Participants were asked whether or not they had sought various forms of help for mental health problems in the past year, including psychotherapy, medications, informal social support, and self-help. Selecting the answer choice for psychotherapy ("I went to therapy: seeing a mental health professional such as a psychologist, counselor, therapist or social worker," distinguished from a separate answer choice for medications) represented an endorsement of the *past-year psychotherapy use* variable.

Perceived Need for Psychotherapy

Those who denied any past-year psychotherapy use were asked whether or not there was any point in the past year at which they "thought [they] might benefit" from each of the above forms of help. Selecting the psychotherapy option ("Yes, therapy: seeing a mental health professional like a counselor, psychologist, or social worker") represented an endorsement of the *perceived need* barrier.

All Contributing Barriers to Psychotherapy Use

Individuals who endorsed perceived need for psychotherapy were then presented with questions regarding their reasons for not receiving psychotherapy despite believing that they might need it. They were asked to select all contributing barriers for not accessing psychotherapy ("Please check *all* reasons that were part of why you did not go to therapy"). The answer choices included eleven common barriers to mental health treatment following the structure of the World Health Organization (WHO) World Mental Health Surveys [11]. See Table 5 for a summary of answer choices provided. Participants were also given the opportunity to select an "other" answer choice with the option for text entry. Text entry responses were hand-coded to either match an existing answer choice (e.g., "don't have the money" was recoded into the "money/insurance" answer choice) or remain in the "other" category. Endorsement versus non-endorsement of each barrier generated separate variables used in analyses for each barrier.

Perceived need for psychotherapy was *not* considered to be a variable included in *all contributing barriers to psychotherapy use,* because participants who denied perceived need were not given the opportunity to select additional barriers (in line with the structure of the WHO World Mental Health Surveys [11]. Therefore, the level of detail collected about this subgroup's (i.e., non-endorsers of perceived need for psychotherapy) access barriers is not sufficient to draw conclusions about *all* contributing barriers that they experienced, and therefore is not comparable to the subgroup (i.e., endorsers of perceived need) who were given the opportunity to provide further detail.

Primary Barrier to Psychotherapy Use

After selecting all barriers that contributed to their lack of past-year psychotherapy use, participants were presented with the same list of barriers and asked to indicate their single primary barrier for not accessing psychotherapy ("Which was the *biggest* reason you didn't go to therapy?"). We generated

a *primary barrier type* variable by grouping individual primary barrier choices into three categories according to prior literature [e.g., 11-13] and the present authors' judgement: attitudinal (e.g., "Didn't think it would work"; including lack of perceived need), structural (e.g., "Issues with money or health insurance"), and other (e.g., "The problem went away by itself"). Denial of the *perceived need for psychotherapy* variable was considered an attitudinal primary barrier. See Figure 1 for an illustration of the categorization scheme.

For the *primary barrier* variable alone, all "other" selections remained coded as "other." For *primary barrier type* variable, text entry responses for the "other" answer choice were recoded directly into barrier type, regardless of whether or not they fit into one of the individual barriers presented. They were recoded to be (1) *attitudinal* (e.g., "too much history. how could I even begin to get a new person up to [speed]"), (2) *structural* (e.g., "no privacy at home guaranteed for phone appointment"), or (3) *other* if did not clearly fit either category (e.g., "anxiety").

Interest in GSH

After reading about the GSH intervention, participants were asked to rate their interest in it on a four-point scale ("Overall, does this treatment sound like something you would be interested in?"; "Not at all interested," "Somewhat interested," "Moderately interested," or "Very interested"). This four-point scale is the *GSH interest* outcome.

Self-Reported Likelihood of GSH Use

The *self-reported likelihood of GSH use* (or "likely GSH use") outcome reflects endorsement that a participant believes that they would be likely to complete at least one GSH session if offered the intervention (i.e., either "I would probably do the first few calls with the coach (1 to 2 weeks) but not finish all the ones I scheduled" or "I would probably do all the calls I signed up for"). Participants who did not reach this question due to denying that they believed they were likely to click on the advertisement, answer the phone call, or agree to enroll in the trial were coded as deniers of likely

GSH use.

Analyses

All analyses were performed in R version 4.3.2 [39]. First, we present descriptive variables for demographic characteristics, symptom severity, and each of the primary outcomes (GSH interest and likely GSH use). We analyzed the relationship of individual characteristics (i.e., demographics and symptom severity) with GSH interest via multivariate polychoric regression in the MASS package Version 7.3-60 [40], and the relationship of these predictors with likely GSH use via multivariate logistic regression. For these analyses and all subsequent analyses involving income as a predictor, n=1 participant was removed from analysis due to a missing value for income. We additionally conducted univariate analyses for race and income, in order to isolate these key sociodemographic variables emphasized in the LIT literature, via two univariate polychoric regressions for GSH interest and two univariate logistic regressions for likely GSH use. These univariate analyses are informative in addition to the multivariate analyses of demographics because we are substantively interested in the potential for LITs to reach low-income groups and marginalized racial-ethnic groups regardless of whether or not other demographic characteristics (e.g., education) account for the difference.

We next present descriptives for past-year psychotherapy use and analyze its relationship with individual characteristics (i.e., demographics and symptom severity) via logistic regression. We analyzed past-year psychotherapy use as a predictor of each GSH interest and likely GSH use via polychoric regression and logistic regression, respectively, controlling for symptom severity in both analyses. Next, for participants whodenied past-year psychotherapy use, we report the frequency statistics regarding endorsement of 1) perceived need for psychotherapy, 2) all other contributing barriers to psychotherapy use, 3) primary barrier to psychotherapy use, and 4) primary barrier type. Finally, we grouped the primary barriers into three categories: attitudinal, structural, and “other.” The groupings were selected by the authors according to previous literature’s definitions of attitudinal

and structural barriers [e.g., 11]. We analyzed demographics and symptom severity as predictors of primary barrier category via multinomial regression in the nnet package Version 7.3-19 [40] to accommodate the three-category outcome. Next, we analyzed primary barrier category as a predictor of each GSH interest and likely GSH use via polychoric regression and logistic regression, respectively, controlling for symptom severity in both analyses. Finally, we analyzed the relationship between each contributing barrier and each outcome via a series of univariate linear regressions.

Transparency and Openness

We report how we determined our sample, all data exclusions, all manipulations, and all measures in the study. All data, analysis code, and research materials are available on the Open Science Framework website online [41]. This study's design and its analysis were not pre-registered. No other papers currently use these data.

Results

Demographics and Descriptives

Most participants identified as non-Hispanic White (665/971, 68.49%) and heterosexual (688/971, 70.85%), with an approximately even gender split (538/971 women, 55.41%) and a median age of 32 (IQR 25-41). (Full sample characteristics are reported in Table 1.) The median K6 score was 11 (IQR 8-15) of 0-24 possible points, where receiving a score greater than 5 was a study inclusion criterion indicating at least mild internalizing distress, and a score of 13 is considered to indicate severe mental health needs [30].

Table 1. Sociodemographic Characteristics for a Sample of Adults with Internalizing Distress

Variable	N=971
Age, Median (IQR)	32 (16)
Gender, n (%)	
Man	390 (40.16%)
Woman	538 (55.41%)

Variable	N=971
Nonbinary, other identity, or undisclosed	43 (4.43%)
Orientation, n (%)	
Heterosexual	688 (70.85%)
Gay/Lesbian	62 (6.39%)
Bisexual	179 (18.43%)
Other/Undisclosed	42 (4.33%)
Race/ethnicity, n (%)	
Non-Hispanic White	665 (68.49%)
Non-Hispanic Black	63 (6.49%)
Hispanic	105 (10.81%)
Asian	85 (8.75%)
Other or Multiracial	53 (5.46%)
Income, n (%)	
<$15,000	122 (12.56%)
$15,000-$25,000	101 (10.40%)
$25,000-$34,999	116 (11.95%)
$35,000-$49,999	145 (14.93%)
$50,000-$74,999	191 (19.67%)
$75,000-$99,999	122 (12.56%)
$100,000-$149,999	111 (11.43%)
>$150,000	62 (6.39%)
NA	1
Education, n (%)	
HS diploma or lower	142 (14.62%)
Some college	257 (26.47%)
Associate's degree	92 (9.47%)
Bachelor's degree	354 (36.46%)
Graduate degree	126 (12.98%)
Internalizing Distress (K6: 0-24), Median (IQR)	11 (7)

Abbreviations: GSH, guided self-help; OR, odds ratio; CI, confidence interval; IQR, inter-quartile range; K6 = Kessler 6 Psychological Distress Scale

Interest in GSH

The large majority of participants (782/971, 80.54%) reported that they were at least "somewhat interested" in GSH, nearly half (458/971, 47.17%) were at least "moderately interested," and 17.1% (166/971) were "very interested." However, a slightly greater proportion (189/971, 19.46%) were "not at all interested." Among all individual characteristics, the only statistically significant predictors of GSH interest were internalizing distress severity (K6 score; OR=1.03; 95% CI 1, 1.06; *P*=.02), such that the odds of reporting higher GSH interest scores increased slightly as internalizing distress severity increased, and educational attainment (*P*=.04), such that individuals who reported some college education had greater odds of reporting higher GSH interest than individuals with no college education (OR = 1.44; 95% CI 1.05, 1.97).

Self-Reported Likelihood of GSH Use

Only 38.62% (375/971) of participants reported that they believed that they would be likely to complete at least one GSH session if it were offered to them. Among all individual characteristics, the only statistically significant predictors of self-reported likelihood of GSH use were age (OR=1.02; 95% CI 1, 1.03; *P*=.007) and income (OR ranging 0.72-1.66*; P*=.03). (See Table 2 for full results.) The relationship between age and self-reported likelihood of GSH use was positive, such that the odds of endorsing likely GSH increased slightly as age increased. The results for income were ambiguous: although the overall relationship between income and self-reported likelihood of GSH use was statistically significant, the individual effects were only significant at one income level (such that individuals with annual household incomes of $100,000-$149,999 had greater odds of endorsing likely GSH use than individuals with annual household incomes of $75,000-$99,999; OR=1.66; 95% CI 1.15, 2.39).

Income and Race

The results of additional univariate analyses highlighting income and race were generally consistent with the multivariate models reported above. The overall effect of income on GSH interest in the univariate model was not statistically significant (OR ranging 0.66-1.3; *P*=.17), although the individual effect of one income level was statistically significant (such that income range $100,000-$149,999 was associated with higher GSH interest relative to income range $150,000+; OR = 0.66; 95% CI 0.47, 0.92). For the univariate model of the effect of income on self-reported likelihood of GSH use, the results were also ambiguous:

although the overall effect of income was statistically significant (OR ranging 0.71-1.6; *P*=.03), the individual effects were only significant at one income level (such that individuals with annual household incomes of $35,000-$49,999 had greater odds of endorsing likely GSH use than individuals with annual household incomes of $25,000-34,999; OR = 1.6; 95% CI 1.12, 2.3). The effect of race was not statistically significant in the univariate analyses for each GSH interest (OR ranging 0.72-1.23; *P*=.36) and self-reported likelihood of GSH use (OR ranging 0.56-1.07; *P*=.21).

Table 2. Results of Two Multivariate Regression Models: (1) Polychoric Regression for Interest in Guided Self-Help, and (2) Logistic Regression for Self-Reported Likelihood of Guided Self-Help Use, Each Predicted From Sociodemographic Characteristics in N=970 [a] Adults with Psychological Distress

	Interest in GSH			Self-Reported Likelihood of GSH Use [b]		
Characteristic	**OR**	**95% CI [c]**	**P-value**	**OR**	**95% CI [c]**	***P*-value**
Age	1.01	1.00, 1.02	.108	1.02	1.00, 1.03	.007
Gender			.410			.383
Man	—	—		—	—	
Woman	1.16	0.91, 1.49		0.89	0.67, 1.18	
Nonbinary, other identity, or undisclosed	1.33	0.72, 2.45		1.35	0.67, 2.72	
Race/ethnicity			.521			.319
Non-Hispanic White	—	—		—	—	
Non-Hispanic Black	1.13	0.72, 1.77		1.01	0.58, 1.75	
Hispanic	1.24	0.84, 1.82		1.06	0.68, 1.64	
Asian	0.79	0.52, 1.19		0.60	0.34, 1.00	
Other or Multiracial	1.00	0.60, 1.66		1.19	0.66, 2.14	
Orientation			.056			.622
Heterosexual	—	—		—	—	
Gay/Lesbian	1.47	0.91, 2.39		0.97	0.55, 1.68	
Bisexual	1.21	0.87, 1.67		1.24	0.85, 1.79	

	Interest in GSH			Self-Reported Likelihood of GSH Use [b]		
Characteristic	**OR**	**95% CI [c]**	**P-value**	**OR**	**95% CI [c]**	***P*-value**
Other/Undisclosed	0.59	0.32, 1.08		0.86	0.41, 1.73	
Income			.184			.031
<$15,000						
$15,000-$25,000	0.87	0.58, 1.30		1.31	0.82, 2.08	
$25,000-$34,999	0.85	0.59, 1.21		0.82	0.54, 1.24	
$35,000-$49,999	0.90	0.63, 1.28		1.13	0.75, 1.70	
$50,000-$74,999	0.67	0.47, 0.94		0.72	0.49, 1.07	
$75,000-$99,999	0.94	0.67, 1.31		1.24	0.85, 1.81	
$100,000-$149,999	1.33	0.96, 1.84		1.66	1.15, 2.39	
>$150,000	1.02	0.76, 1.36		0.87	0.62, 1.22	
Education			.041			.683
No College	—	—		—	—	
Some college	1.44	1.05, 1.97		1.17	0.81, 1.68	
Associate's degree	0.84	0.60, 1.15		1.12	0.78, 1.63	
Bachelor's degree	1.09	0.86, 1.37		1.17	0.90, 1.53	
Graduate degree	0.80	0.59, 1.10		0.87	0.61, 1.24	
Internalizing Distress (K6: 0-24)	1.03	1.00, 1.06	.025	1.02	0.98, 1.05	.346

Abbreviations: GSH, guided self-help; OR, odds ratio; CI, confidence interval; K6 = Kessler 6 Psychological Distress Scale

[a] Each model is based on the n=970 with complete demographic data, because n=1 participant had a missing value for income.

[b] The reference level is denying likely use of GSH, such that OR>1 reflects a positive association with endorsing likely use of GSH.

[c] For categorical variables, the *P*-value shown is an omnibus *P*-value calculated across all levels of the variable.

Past-Year Psychotherapy Use

Descriptives and Sociodemographics

We found that only about one third (331/971, 34.09%) of participants reported past-year psychotherapy use. Higher internalizing distress severity had a statistically significant relationship with past-year psychotherapy use (OR=1.07; 95% CI 1.03, 1.1; *P*<.001), such that odds of endorsing past-year psychotherapy use increased slightly as internalizing distress severity increased. Greater educational attainment was also associated with greater odds of reporting past-year psychotherapy use at some levels of education (*P*<.001); for example, individuals with a Bachelor's degree had greater odds of endorsing past-year psychotherapy use than individuals with an Associate's degree (OR=1.41; 95% CI 1.06, 1.88). Additionally, past-year psychotherapy use significantly differed by sexual orientation (*P*=.005): for example, gay and lesbian participants had greater odds of endorsing past-year psychotherapy use than heterosexual participants (OR=1.95; 95% CI 1.11, 3.41), and bisexual participants had greater odds of endorsing past-year psychotherapy use than gay and lesbian participants (OR=1.82; 95% CI 1.24, 2.64). (See Table 3.)

Table 3. Results of Logistic Regression Model Predicting Past-Year Psychotherapy Use From Sociodemographic Characteristics in N=970 [a] Adults with Internalizing Distress

Characteristic	OR [b]	95% CI	*P*-value [c]
Age	0.99	0.98, 1.01	.223
Gender			.088
Man	—	—	
Woman	1.24	0.91, 1.68	
Nonbinary, other identity, or undisclosed	2.13	1.04, 4.44	
Orientation			.005
Heterosexual	—	—	
Gay/Lesbian	1.95	1.11, 3.41	
Bisexual	1.82	1.24, 2.64	
Other/Undisclosed	1.56	0.77, 3.13	
Race/ethnicity			.358

Characteristic	OR [b]	95% CI	*P*-value [c]
Non-Hispanic White	—	—	
Non-Hispanic Black	0.99	0.54, 1.77	
Hispanic	1.22	0.77, 1.91	
Asian	0.63	0.36, 1.06	
Other or Multiracial	0.90	0.47, 1.67	
Income			.259
<$15,000	—	—	
$15,000-$25,000	1.44	0.89, 2.33	
$25,000-$34,999	1.39	0.90, 2.14	
$35,000-$49,999	1.05	0.69, 1.61	
$50,000-$74,999	0.75	0.50, 1.13	
$75,000-$99,999	0.92	0.61, 1.37	
$100,000-$149,999	1.13	0.76, 1.66	
>$150,000	1.14	0.79, 1.64	
Education			<.001
No college	—	—	
Some college	2.72	1.83, 4.09	
Associate's degree	0.88	0.59, 1.31	
Bachelor's degree	1.41	1.06, 1.88	
Graduate degree	0.90	0.62, 1.31	
Internalizing Distress (K6: 0-24)	1.07	1.03, 1.10	<.001

Abbreviations: GSH, guided self-help; OR, odds ratio; CI, confidence interval; K6 = Kessler 6 Psychological Distress Scale

[a] This model is based on the n=970 with complete demographic data, because n=1 participant had a missing value for income.

[b] The reference level is denying past-year psychotherapy use, such that OR>1 reflects a positive association with endorsing past-year psychotherapy use.

[c] For categorical variables (all except age and psychological distress), the *P*-value shown is an omnibus *P*-value calculated across levels of the variable.

Interest in GSH

Among those who denied past-year psychotherapy use, 77.66% (497/640) were at least "somewhat interested" in GSH, 39.84% (255/640) were at least "moderately interested," and 11.25% (72/640) were "very interested." Nearly one fifth (143/640, 22.34%) were "not at all interested." By contrast, among those who endorsed past-year psychotherapy use, 86.1% (285/331) were at least "somewhat interested" in GSH and 28.4% (94/331) were "very interested." Only 13.9% (46/331) were "not at all interested." The difference in GSH interest between groups was statistically significant: those who had used psychotherapy in the past year were much more interested in GSH than those who had not, such that their odds of reporting higher GSH interest were over twice as great (OR=2.38; 95% CI 1.86, 3.06; *P*<.001). This effect was not accounted for by the effect of internalizing distress severity, which was not a statistically significant predictor of GSH interest in this model (OR=1.02; 95% CI 0.99, 1.04; *P*=.18).

Self-Reported Likelihood of GSH Use

Among those denying past-year psychotherapy use, approximately one third (205/640, 32.03%) reported that they would be likely to complete at least one GSH session, whereas over half (170/331, 51.36%) of those endorsing past-year psychotherapy use reported that they would be likely to do so. This difference was statistically significant and large (OR=2.25; 95% CI 1.71, 2.96; *P*<.001), such that participants who endorsed psychotherapy use had over twice the odds of endorsing likely GSH use relative to participants who denied psychotherapy use. This effect was not accounted for by the effect of internalizing distress severity, which was not a statistically significant predictor of self-reported likelihood of GSH use in this model (OR=1; 95% CI 0.97, 1.03; *P*=.91).

Descriptives for Barriers to Psychotherapy Access

Denying that "you felt you might benefit" from psychotherapy in the past year (i.e., no perceived need; 206/640, 32.19%) and endorsing "issues with money or insurance" (170/640, 26.56%) were the most common primary access barriers. The frequency of these two primary barriers far exceeded the frequency of the third-most common primary barrier, "wanted to handle the problem alone," which was endorsed as primary by only 7.34% (47/640) of participants who denied past-year psychotherapy use. (See Figure 1.) When the subgroup who endorsed perceived need for psychotherapy (434/640, 67.81%) was given the opportunity to select multiple contributing reasons for not using psychotherapy, the most commonly chosen barrier was "issues

with money or insurance" (323/434, 74.42% of those endorsing perceived need). "Didn't know where to go or who to see" (230/434, 53%) and "too busy/not enough time" (190/434, 43.78%) were the second- and third-most commonly selected amongst all contributing barriers. (See Figure 2.)

Descriptives for Primary Barrier Type

We grouped primary barriers into three categories: structural (e.g., money), attitudinal (e.g., not perceiving need), and "other" (e.g., "didn't know who to see or where to go"). (See Figure 1 for groupings.) Attitudinal primary barriers, reported by over half of the subsample (336/640, 52.5% of those denying past-year psychotherapy use), were more common than structural primary barriers (244/640, 38.12%). Only 9.38% (60/640) of primary barriers fell into the "other" category. Relative to reporting a structural primary barrier, reporting an attitudinal primary barrier was significantly associated with higher age (such that odds increase slightly as age increases; OR=1.03; 95% CI 1.01, 1.04; *P*=.004), higher incomes (such that odds increase across each increment on an eight-point income scale; OR ranging 1.17-3.51; *P*=.008), and identifying as a man relative to identifying as a woman (where women's odds of endorsing an attitudinal barrier relative to a structural barrier were less than half the size of men's odds of doing so; OR=0.46; 95% CI 0.32, 0.67; across all genders, *P*<.001). There were also statistically significant differences across sexual orientations (*P*=.01): compared to gay and lesbian participants, bisexual participants had much lower odds of reporting an attitudinal primary barrier relative to reporting a structural primary barrier (OR=0.38; 95% CI 0.22, 0.66). (See Table 5 for effects of endorsing an "Other"-type barrier.) (See Table 4.)

GSH Interest by Primary Barrier Type

Among participants with an attitudinal barrier, 69.34% (233/336) were at least "somewhat interested" in GSH, whereas 87.29% (213/244) of those with a structural primary barrier were at least "somewhat interested." Only about one third (108/336, 32.14%) of those with an attitudinal primary barrier were at least "moderately interested" in GSH, versus nearly half (118/244, 48.36%) of those with a structural primary barrier. Only 8.33% (28/336) of participants with an attitudinal primary barrier were "very interested" in GSH, versus 14.75% (36/244) of those with a structural primary barrier. Finally, less than one third of individuals with an attitudinal primary attitudinal barrier reported that they were "not at all interested" in GSH (103/336, 30.65%) compared to just 12.7% (31/244) of individuals with a structural primary barrier. Overall, the effect of primary barrier type on GSH interest was statistically significant (*P*<.001). Compared to participants with a structural primary barrier, participants with an attitudinal primary barrier had less than half the odds of reporting higher GSH scores (OR=0.44; 95% CI 0.32, 0.6). This effect was not accounted for by the effect of internalizing distress severity, which was not a statistically significant predictor GSH interest in this model

(OR=0.99; 95% CI 0.96, 1.02; *P*=.53). The effect of reporting an “other”-type primary barrier was not statistically significant (OR=0.93; 95% CI 0.56, 1.55), relative to reporting an attitudinal primary barrier.

Likelihood of GSH Use by Primary Barrier Type

Only 26.79% (90/336) of participants with an attitudinal primary barrier reported that they would be likely to complete at least one GSH session, whereas nearly 40% (91/244, 37.3%) of those with a structural primary barrier reported that they would be likely to do so. This difference was statistically significant, such that reporting an attitudinal primary barrier was associated with lower odds of endorsing likely GSH use (OR=0.61; 95% CI 0.43, 0.87; *P*=.007) relative to reporting a structural primary barrier. This effect was not accounted for by the effect of internalizing distress severity, which was not a statistically significant predictor of self-reported likelihood of GSH use in this model (OR=0.99; 95% CI 0.95, 1.03; *P*=.18). The effect of endorsing an “other”-category primary barrier relative to an attitudinal primary barrier was also not statistically significant (OR=1.11; 95% CI 0.62, 1.98; *P*=.72).

Table 4. Results of a Multivariate Multinomial Regression Model Predicting Type of Primary Barrier to Past-Year Psychotherapy Use [a] by Sociodemographic Characteristics in N=640 Adults with Internalizing Distress

	Attitudinal [a]			Other		
Characteristic	**OR**	**95% CI**	**P-value** [b]	**OR**	**95% CI**	**P-value** [b]
Age	1.03	1.01, 1.04	.004	1.00	0.97, 1.03	.004
Gender			<.001			<.001
Man	—	—		—	—	
Woman	0.46	0.32, 0.67		1.16	0.60, 2.21	
Nonbinary, other identity, or undisclosed	0.53	0.17, 1.65		1.86	0.32, 10.9	
Orientation			.013			.013
Heterosexual	—	—		—	—	
Gay/Lesbian	0.92	0.41, 2.10		0.85	0.22, 3.31	
Bisexual	0.38	0.22, 0.66		0.90	0.41, 1.96	
Other/Undisclosed	1.79	0.67, 4.77		0.94	0.17, 5.09	
Race/ethnicity			.389			.389
Non-Hispanic White	—	—		—	—	

	Attitudinal [a]			Other		
Characteristic	**OR**	**95% CI**	**P-value [b]**	**OR**	**95% CI**	**P-value [b]**
Non-Hispanic Black	1.66	0.80, 3.47		2.11	0.67, 6.59	
Hispanic	1.24	0.66, 2.32		1.67	0.66, 4.20	
Asian	2.09	1.04, 4.20		1.54	0.51, 4.61	
Other or Multiracial	1.09	0.48, 2.44		2.09	0.68, 6.43	
Income			.008			.008
<$15,000	—	—		—	—	
$15,000-$25,000	3.51	1.54, 8.03		3.78	1.22, 11.8	
$25,000-$34,999	2.51	1.16, 5.44		3.22	1.10, 9.39	
$35,000-$49,999	1.74	0.86, 3.52		1.85	0.69, 4.96	
$50,000-$74,999	2.19	1.21, 3.97		1.34	0.51, 3.55	
$75,000-$99,999	1.75	1.02, 2.98		1.92	0.78, 4.73	
$100,000-$149,999	1.53	0.92, 2.56		2.89	1.25, 6.70	
>$150,000	1.17	0.75, 1.83		0.39	0.16, 0.96	
Education			.196			.196
No college	—	—		—	—	
Some college	0.68	0.41, 1.12		0.97	0.41, 2.26	
Associate's degree	1.09	0.66, 1.81		1.13	0.46, 2.79	
Bachelor's degree	0.97	0.67, 1.40		0.73	0.40, 1.34	
Graduate degree	1.49	0.94, 2.38		0.75	0.31, 1.77	
Internalizing Distress (K6: 0-24)	0.96	0.91, 1.00	.090	0.95	0.89, 1.02	.090

Abbreviations: GSH, guided self-help; OR, odds ratio; CI, confidence interval

[a] The reference level for the outcome variable is endorsement of a structural primary barrier.

[b] For categorical variables, the *P*-value shown is an omnibus *P*-value calculated across all levels of the variable.

Interest in GSH by Each Contributing Barrier

Among those denying past-year psychotherapy use, endorsing perceived need for psychotherapy was significantly associated with higher interest in GSH relative to denying perceived need, with odds of higher GSH interest scores over twice as great (OR=2.11; 95% CI 1.55, 2.88; *P*<.001). This effect was not accounted for by the effect of internalizing distress severity, which was not a statistically significant predictor of GSH interest in this model (OR=0.99; 95% CI 0.96, 1.03; *P*=.75). Among those who endorsed perceived need, and were therefore given the opportunity to select multiple contributing barriers to psychotherapy access, the only individual barrier that was significantly associated with interest in GSH was "problems like lack of transportation, moving away, couldn't find a babysitter, need to stay home to take care of somebody" (OR=1.52; 95% CI 1.04, 2.23; *P*=.03), such that endorsing this barrier was associated with higher interest in GSH. (See Figure 3 and Table 5.)

Self-Reported Likelihood of GSH Use by Each Contributing Barrier

Similarly, among those without past-year psychotherapy use, endorsing perceived need for psychotherapy was associated with greater odds of endorsing likely GSH use (OR=1.51; 95% CI 1.05, 2.2; *P*=.03) relative to denying perceived need. This effect was not accounted for by the effect of internalizing distress severity, which was not a statistically significant predictor of self-reported likelihood of GSH use in this model (OR=0.99; 95% CI 0.95, 1.03; *P*=.75). However, among those who endorsed perceived need, and were therefore given the opportunity to select multiple contributing barriers to psychotherapy access, none of the other individual barriers (e.g., "issues with money/insurance," "problems like lack of transportation…") had a statistically significant relationship with self-reported likelihood of GSH use. (See Table 5.)

Table 5. Results of Univariate Logistic Regression Models [a] for Outcomes (1) Interest in Guided Self-Help and (2) Self-Reported Likelihood of Guided Self-Help Use, Each Predicted from Endorsement of Each of All Contributing Barriers to Past-Year Psychotherapy Use [a]

	GSH Interest			Self-Reported Likelihood of GSH Use		
Barrier [b]	**OR**	**95% CI**	**P-value**	**OR** [c]	**95% CI**	**P-value**
It won't work	0.71	0.47, 1.06	.097	0.99	0.62, 1.58	.973
Problem went away	0.76	0.4, 1.44	.395	0.93	0.41, 2	.861
Want to handle alone	0.84	0.59, 1.19	.318	0.97	0.65, 1.45	.898
Don't want to share private info	0.76	0.54, 1.08	.131	0.93	0.62, 1.39	.71
Worried about what others think	1.51	0.97, 2.36	.070	1.19	0.72, 1.95	.481
Didn't know where to go	0.71	0.47, 1.06	.097	0.99	0.62, 1.58	.973

	GSH Interest			Self-Reported Likelihood of GSH Use		
Barrier [b]	**OR**	**95% CI**	**P-value**	**OR** [c]	**95% CI**	**P-value**
Too busy/not enough time	0.94	0.67, 1.33	.727	1.08	0.73, 1.61	.701
Money or insurance	1.27	0.85, 1.91	.238	0.93	0.59, 1.47	.75
Needing to stay home or not having transportation	1.52	1.04, 2.23	.031	1.17	0.76, 1.81	.475
On a waitlist	1.13	0.66, 1.92	.661	0.99	0.62, 1.58	.973
Provider might be culturally insensitive	0.97	0.63, 1.5	.896	0.99	0.62, 1.58	.973
Other reason	0.75	0.43, 1.31	.312	0.62	0.29, 1.22	.172

Abbreviations: GSH, guided self-help; OR, odds ratio; CI, confidence interval

[a] These models used the subsample of n=640 participants who denied past-year psychotherapy use and endorsed perceived need for psychotherapy.

[b] Participants were given the opportunity to choose multiple answer choices. Each row in the table represents two independent univariate regressions (one for each GSH-related outcome), where the single predictor is binary endorsement of the barrier in column 1. The reference level for the endorsement variable is non-endorsement, such that OR>1 reflects a positive association with endorsing the barrier.

[c] The reference level is denying likely use of GSH, such that OR>1 reflects a positive association with endorsing likely use of GSH.

Discussion

In this study, we evaluated assumptions about the promise of LITs to expand treatment access by circumventing structural barriers to traditional psychotherapy via an exploration of the relationship between psychotherapy access barriers, interest in GSH, and self-reported likelihood of using GSH. Broadly, we found reason to question the assumptions that individuals who faced barriers to traditional psychotherapy would be more willing to use GSH. In our sample of individuals who reported clinically significant internalizing distress, those who did *not* use psychotherapy in the past year were *much less* interested in GSH and *much less* likely to predict that they would use GSH

relative to those who had used psychotherapy in the past year. Our results suggest that this difference might be explained by the high prevalence of attitudinal (versus structural) barriers observed among those without past-year psychotherapy use, especially lack of perceived treatment need. Endorsement of attitudinal barriers had very strong relationships with our indicators of potential GSH use (i.e., interest and self-reported likelihood of use), suggesting the potentially important role of these barriers in LIT uptake for individuals with unmet treatment need.

Limitations

One substantial limitation of this study is that our analyses are restricted to participants' opinions drawn from a brief description of a single GSH bibliotherapy delivered over the internet. While interest in bibliotherapy is somewhat higher than interest in fully digital interventions [42], these results may not generalize to other LIT formats (e.g., apps, groups). Another limitation is that the structure of our questionnaire may have limited our ability to investigate the relative influence of all contributing barriers within participants. Checklist-format questions may distort results by encouraging participants to over-endorse answer choices [43], such that our participants may have endorsement of substantially varying importance. For example, even a participant who did not seek treatment primarily because they believe it did not work might select "money" as a barrier due to the logic that they would not want to spend money on something that is not going to work. Therefore, future research might allow participants to rate the relevance of each barrier on a Likert scale to capture greater complexity.

Another limitation of our survey structure is that participants without perceived need for psychotherapy were not queried about any other barriers because we followed the structure of similar questions in the WHO World Mental Health Surveys [11]. This survey structure obscures the possible role of multiple barriers for this group. This may also have interfered with our analyses of all contributing barriers. Finally, this study is limited by its reliance on self-report. It is possible that

participants' stated barrier for not accessing psychotherapy does not reflect the actual access barriers they encountered. It is also possible that self-reported likelihood of using GSH overestimates actual likelihood of using GSH. Although the theory of planned behavior [26] suggests that treatment attitudes and behavioral estimates may be strong predictors of actual behavior [27-28], future work should measure observable behavior such as treatment seeking and treatment initiation; for example, offering participants a LIT option after querying them about psychotherapy access barriers.

Strengths

This study's major novel contribution is its investigation of existing psychotherapy access and potential LIT access in the same sample. Previous literature has extensively reported on psychotherapy access barriers and LIT interest separately but has often neglected to measure them together. Investigating their relationship is essential to directly evaluating the assumptions that individuals without traditional psychotherapy access will be able to access LITs. In addition, we investigated the assumed mechanisms by which LITs might expand treatment access, i.e., by circumventing structural barriers to traditional psychotherapy. Importantly, our data captured a wide range of commonly studied barriers to psychotherapy access including several attitudinal barriers, rather than focusing on only those access barriers commonly addressed in the LIT literature (e.g., cost and geographic location).

Another unique strength of the present study is that we parsed participants' *interest* in GSH from their self-reported likelihood of *actually using* GSH. The predictors of these outcomes were similar across analyses, but their differing base rates contribute unique information. For example, amongst individuals who did not access psychotherapy in the past year, the percentage who predicted that they would use GSH (35%) was lower than the percentage who were at least moderately interested in GSH (42%) and approximately half the percentage who were at least somewhat interested (79%). This distinction is important because participants' own estimates of their likely treatment-seeking

behavior should be a stronger predictor of actual treatment use than treatment attitudes, according to the theory of planned behavior [26-28]. Understanding if these differences are attributable to the attractiveness of the intervention versus other factors (e.g., motivation) is relevant to developing approaches to expand LIT use.

Implications

We found some evidence supporting the popular theory that LITs will appeal to treatment seekers who face structural barriers to psychotherapy access, especially compared to individuals primarily facing attitudinal barriers. Specifically, individuals unable to leave the home or get transportation to attend psychotherapy may be more interested in LITs, and this barrier may play a larger role in the appeal of LITs than other structural barriers (e.g., money, time). This supports the potential for LITs to reach this population of individuals with unmet treatment needs.

However, the results of this study may also suggest that uninvestigated assumptions about the appeal of LITs could limit their reach. Our results suggested that attitudinal factors (e.g., lacking perceived need for treatment) that limit traditional psychotherapy use may also serve as barriers to LIT use. For example, individuals experiencing mental health issues who do not believe they need psychotherapy may also believe they do not need LITs. Our results suggested support for greatly lower interest in LITs in these populations. Our results were also consistent with other literature suggesting that attitudinal barriers to psychotherapy use may be *more common* than the structural barriers that LITs target [11-12]. Taken together, these findings suggest the possibility that attitudinal barriers could significantly limit the ability of LITs to expand treatment access to individuals with unmet need. This would suggest that failing to address attitudinal barriers may substantially limit LITs' potential public health impact if this obstacle is left unaddressed.

In addition, our findings also suggest that individuals already attending psychotherapy may be more

likely to use LITs. This suggests the possibility that LITs may serve as an *additional* treatment option for those with existing psychotherapy access, rather than a primary treatment option for those without it. Therefore, there may be a risk that LITs could intensify rather than alleviate treatment inequity. However, this also suggests that LITs may have particular value when they offer services distinct from existing psychotherapy resources. For example, many evidence-based techniques are underutilized by community therapists and may be effectively implemented by LITs (e.g., cognitive behavioral psychotherapy for insomnia) [44].

We did not find evidence supporting racial differences in indicators of potential GSH use, potentially supporting the broad appeal of LITs across racial-ethnic groups. However, previous literature has suggested that attitudinal barriers may vary by race [21-22], suggesting that consideration of attitudinal barriers in future research should pay special attention to cultural considerations. By contrast, results did support a relationship between income and indicators of potential GSH use, but no clear trend in the direction of this relationship was revealed. This may reflect the complexity of the relationship between socioeconomic status and potential use of LITs. For example, there may be qualitative differences in attitudes about mental health treatment between individuals living in poverty, individuals in the middle class, and individuals with high incomes, rather than a simple linear pattern as income increases. These phenomena might impact the appeal of LITs across these groups, such that understanding them might inform design and dissemination strategies.

Finally, our findings have implications for interpreting common findings in the current LIT literature. For example, while trials of LITs might successfully attract participants *already interested* in traditional psychotherapy but unable to access it due to structural reasons, the samples might underrepresent individuals facing attitudinal barriers to traditional psychotherapy. This biased sample would not reflect the total target population for LITs (individuals with untreated mental health problems), such that estimates of LIT use could be inflated and design elements intended to increase

LIT use might not be generalizable to the total population. This would be particularly concerning because rates of LIT use are already low, and much work has been devoted to testing the effectiveness of design alterations intended to increase engagement [45].

Future Directions

Future research should more directly seek to understand currently unaddressed barriers to LIT access, especially attitudinal barriers. This study did not investigate attitudinal barriers to LITs specifically, and future research might test for differences in attitudes about “traditional” psychotherapy versus LITs and across different LIT formats. For example, the effect of reluctance to share private information with another person might differ between face-to-face psychotherapy, guided self-help bibliotherapy, and unguided iPhone apps. Future research should translate these findings into adaptations of LIT designs and dissemination strategies. Treatment developers should consider how design choices might mitigate attitudinal barriers that are revealed in earlier research. For example, reticence to share private information online is a common complaint cited by participants with low adherence in trials for digital mental health interventions, so treatment developers might emphasize extensive and understandable information about data security. As discussed above, it is likely that common attitudinal factors serve as barriers to traditional psychotherapy and LITs alike, such that existing approaches to increasing general help-seeking (e.g., aimed at stigma and mental health literacy) [46] may be well positioned for enhancement and adaptation as applicable to LITs specifically. This work should pay special attention to cultural considerations, beginning with research elucidating the likely complex relationship between treatment attitudes and race, ethnicity, sexual and gender identities, and socioeconomic status.

Overall, this work suggests the importance of questioning assumptions about how potential solutions to the mental health treatment gap will achieve their stated aims. LITs clearly do have an advantage over traditional psychotherapy in their scalability, because their low resource requirements and low

intensity of use allow them to circumvent structural barriers to traditional psychotherapy access. However, addressing the treatment gap in mental healthcare will likely require strategic consideration of multiple factors, including both attitudinal and structural barriers. Neglecting potential obstacles to LITs' reach may hamper both LITs' public health impact and the quality of LIT research. For example, while LITs tend to be lower cost than traditional psychotherapy, even small costs may be barriers to their use [18]. In addition, existing literature has already raised concern that gaps in the literature may hamper LITs' utility in addressing racial-ethnic inequalities in access to mental health care [18,24]. Our findings that LITs may be more accessible to those with existing psychotherapy access, possibly due to unaddressed attitudinal barriers, extend this work. While it is clear that LITs can be efficacious [e.g., 9-10], further research on their disseminability is needed [47-48]. Already there is evidence that evidence-based LITs are rarely made easily accessible to the public [49] and have a very poor uptake in routine care [50-51]. Understanding the wide range of obstacles to LITs' dissemination and uptake may be essential to maximizing their impact. Our work suggests that addressing individuals' attitudinal barriers may be a promising path to expanding the reach of LITs by increasing their uptake.

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Data Availability

No other papers currently use these data. Study data, code, and survey materials can be accessed on

the Open Science Framework website [41].

Conflicts of Interest

LL has received consulting fees from Happify Health Inc, who had no role in this study. The funders had no role in the drafting of the manuscript.

Abbreviations

CBT: cognitive behavior psychotherapy

CI: confidence interval

DWM: Doing What Matters in Times of Stress

GSH: guided self-help

K6: Kessler 6 Psychological Distress Scale

LITs: low-intensity interventions

OR: odds ratio

WHO: World Health Organization

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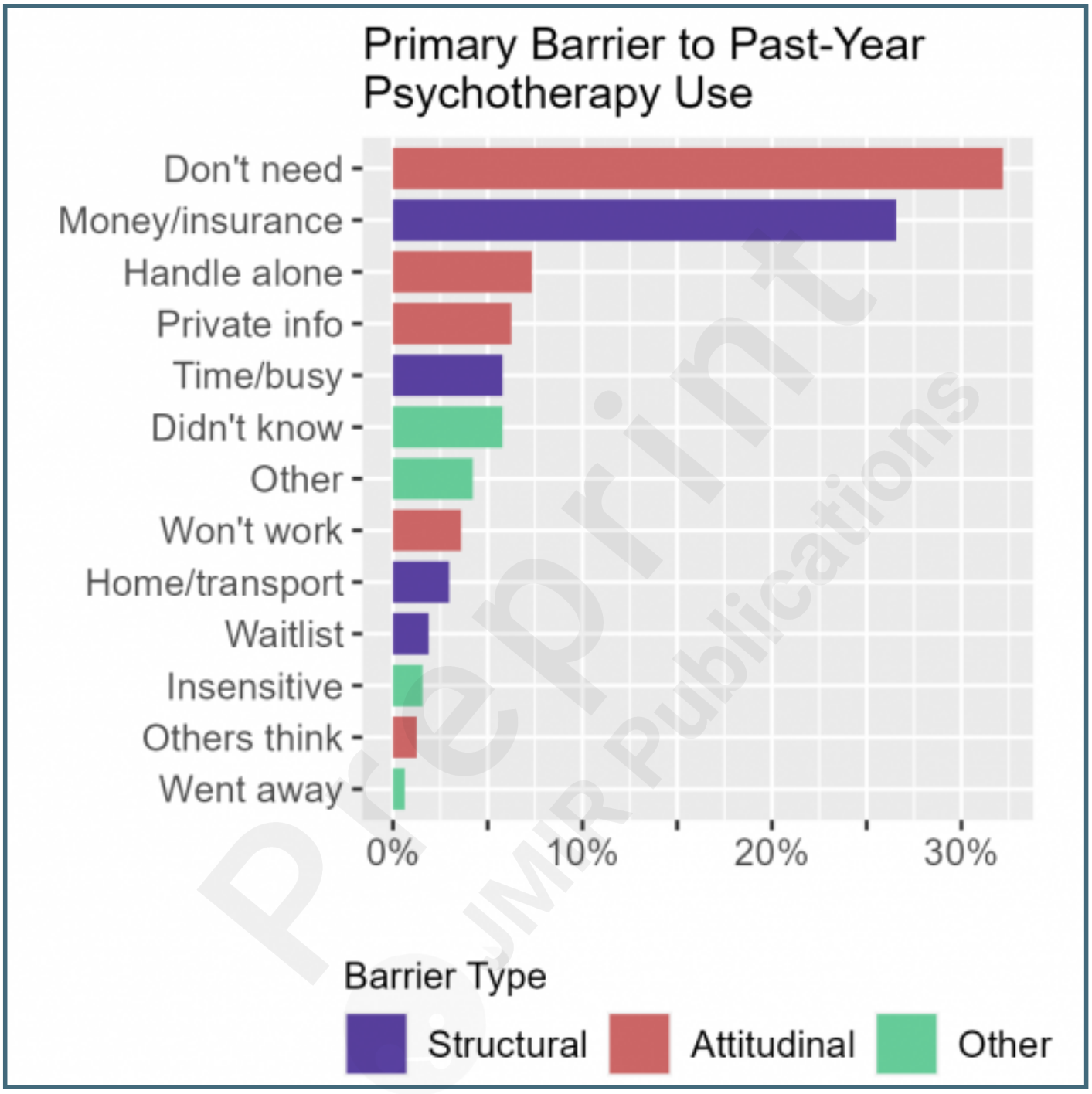
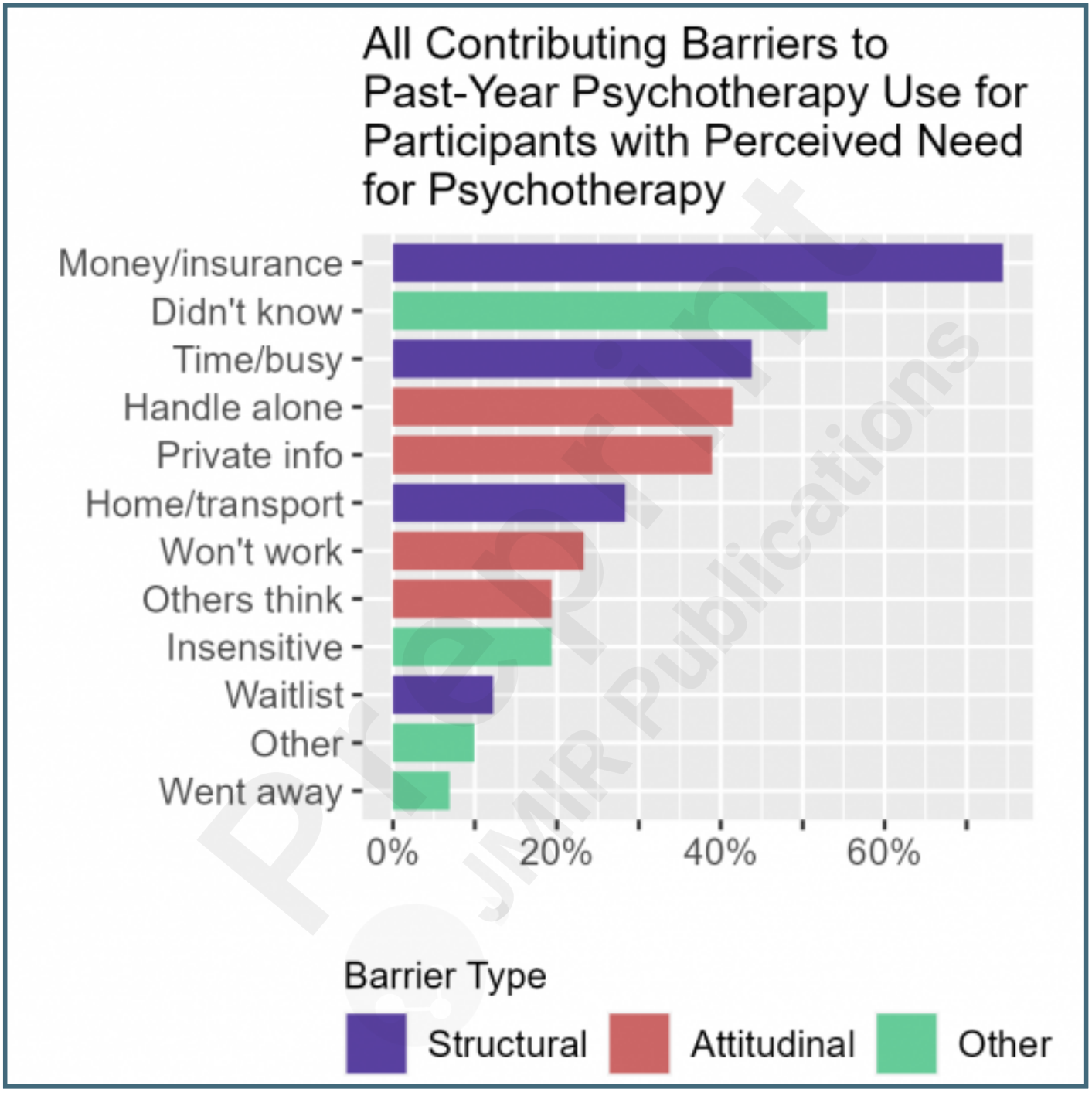
Supplementary Files

Figures

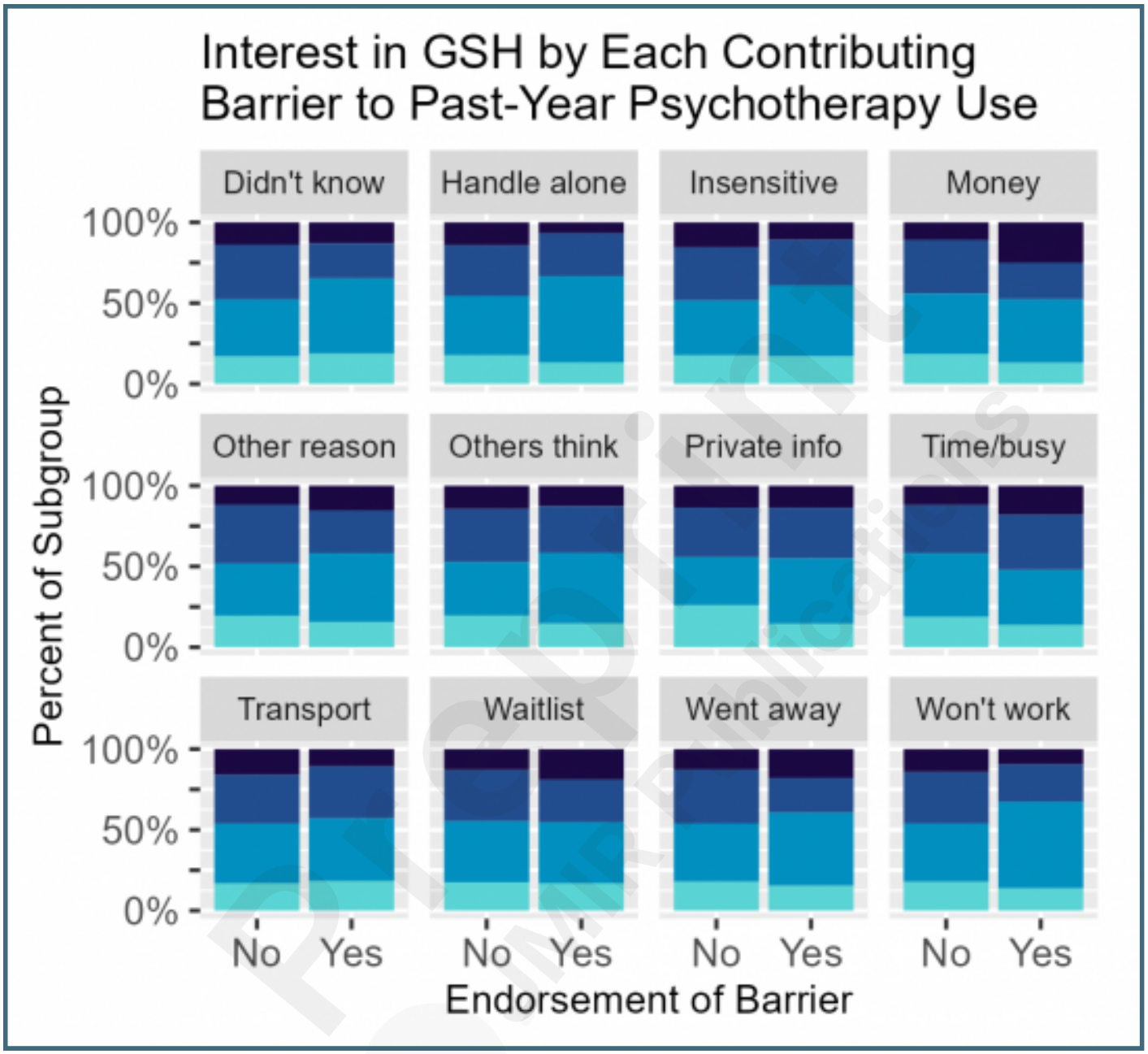
N=640 participants who denied past-year psychotherapy use.



N=434 participants who denied past-year psychotherapy use and endorsed perceived need for psychotherapy, and were therefore given the opportunity to select multiple barriers to psychotherapy access.



N=640 participants who denied past-year psychotherapy use. Abbreviations: GSH, guided self-help.



Multimedia Appendixes

Supplementary figures.
URL: http://asset.jmir.pub/assets/98e1956aa3aee76d4bb951a01a99caaf.docx

Supplementary tables.
URL: http://asset.jmir.pub/assets/fca550ca07b7fb2a4ebcb8e5afe6c51e.docx