

RESEARCH ARTICLE

Alone With Distress: How Social Loneliness Shapes Healthcare Alienation and Mental Healthcare Help-Seeking

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Received: 30 November 2025 | **Revised:** 3 August 2026 | **Accepted:** 5 August 2026

Keywords: alienation | healthcare | help-seeking | loneliness | mental health | services

ABSTRACT

Social isolation is a major contributor to today's mental health problems, yet many individuals still do not seek professional psychological support. At the same time, the growth of digital platforms has encouraged consumers to adopt self-management strategies, raising important questions about whether these tools help or hinder movement toward formal care. While loneliness is known to affect emotional well-being, far less is understood about how it shapes perceptions of institutional and service-related barriers, such as alienation from and trust in the healthcare system. Across one survey and two online experiments, we examine whether social loneliness is associated with alienation from the healthcare system and lower help-seeking, and whether digital self-management support can serve as a bridge toward renewed engagement with mental healthcare services. Results show that loneliness heightens feelings of alienation from the healthcare system, which reduces trust and discourages professional help-seeking. However, this negative cycle can be interrupted: exposure to digital self-management support can disrupt the link between loneliness and alienation, thereby preserving trust and willingness to seek professional care. These findings highlight the potential of digital tools as early catalysts for reconnecting socially isolated individuals with the mental healthcare system.

1 | Introduction

Two critical societal challenges are intensifying worldwide. Loneliness is steadily rising, with one in six individuals reporting persistent feelings of isolation and an estimated 871,000 deaths attributed to its consequences each year (WHO 2025a). At the same time, the world is facing a mental health crisis, with more than one billion people currently living with a mental health disorder (WHO 2025b) and many struggling to obtain treatment (Moitra et al. 2023). These two issues not only intensify but also mutually reinforce each other. Loneliness has a substantial negative impact on people's mental health (Leigh-Hunt et al. 2017) and can trigger the development of mental disorders (Mann et al. 2022), while individuals living with mental disorders are more likely to experience social isolation

and alienation from society (Caple et al. 2023). This negative feedback loop creates a particularly vulnerable yet understudied group of individuals whose cumulative constraints generate significant barriers to accessing professional services. Accordingly, these vulnerable individuals require marketing and service approaches designed to alleviate their struggles and reduce barriers to psychological care, a challenge that service research is well positioned to address (Hammedi et al. 2024). This challenge aligns closely with patient-centric approaches, which aim to adapt healthcare services to consumers' emotional, relational, and experiential needs (Berry et al. 2024).

Loneliness, especially social loneliness, reflects a lack of meaningful integration in one's social environment (Weiss 1973) and is associated with heightened sensitivity to rejection, lower social

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confidence, and avoidance of interpersonal contexts (Czaja et al. 2021; Han et al. 2015). These tendencies can shape not only personal relationships but also how individuals approach institutional settings (Brandt et al. 2022). When individuals expect rejection or feel disconnected from others, this sense of distance can generalize to institutions that are meant to provide support (Lee and Chung 2026). Consumers may thus feel alienated from services or institutions, reflecting a perceived lack of belonging, legitimacy, or recognition within institutional structures and linked to disengagement from services (Fumagalli et al. 2022). In healthcare, alienated individuals often report lower trust in the system's ability to respond supportively and appropriately and feel less entitled to seek care (McLaren et al. 2023). This institutional pathway may be especially consequential in mental healthcare, where care is highly relational (Danaher et al. 2023) and requires emotional vulnerability (Awan et al. 2025). In such contexts, expectations of rejection or poor treatment may substantially reduce the likelihood of seeking professional help (Kemp et al. 2023).

Despite growing interest in loneliness (Shrum et al. 2023) and mental health within marketing (Farrell et al. 2024), the mechanisms linking social loneliness to mental healthcare engagement remain underdeveloped. Existing work has largely focused either on the interpersonal consequences of loneliness (Cacioppo et al. 2015) or on structural barriers to care, such as provider shortages or low mental health literacy (e.g., Kemp et al. 2023; Moitra et al. 2023). As a result, less is known about how loneliness influences consumers' relationships with the healthcare system and how these perceptions shape movement toward formal care.

We address this gap by proposing and testing a moderated mediation framework linking social loneliness to professional help-seeking. Our primary contribution is to identify alienation from the healthcare system as an underexamined psychological mechanism through which social loneliness can reduce help-seeking, and to show that this effect unfolds through lower trust in healthcare. In doing so, we extend loneliness research beyond its usual interpersonal focus by showing that social disconnection can spill over into consumers' perceptions of a formal service system. We also examine whether digital self-management support can serve as a psychologically safer and more accessible entry-stage touchpoint, helping socially lonely consumers take initial steps toward care. Across a survey and two experimental studies, we test these predictions among individuals facing social loneliness.

2 | Theoretical Background and Hypotheses Development

2.1 | Loneliness and Access to Health Services

Loneliness is an unpleasant subjective feeling of inadequate social connection that occurs when individuals perceive a discrepancy between desired and actual social relations (Weiss 1973). Following Weiss (1973), loneliness comprises two distinct forms. Emotional loneliness arises from the absence of close, intimate bonds and reflects a lack of meaningful attachment, whereas social loneliness stems from insufficient integration within a broader social network and manifests as a weakened sense of belonging

and shared identity. This feeling can persist even in the presence of social contact (Cacioppo and Cacioppo 2018b) and is associated with diminished well-being and physical and mental health (Mann et al. 2022). It can prompt opposing behavioral responses: some individuals attempt to restore connection (Cacioppo and Cacioppo 2018a), whereas others withdraw from social situations that feel threatening or emotionally demanding (Han et al. 2015).

Socially lonely individuals commonly experience heightened rejection sensitivity, lower social confidence, and greater avoidance of interpersonal environments perceived as judgmental or emotionally demanding (Whelan et al. 2016). In marketplace contexts, these tendencies manifest as preferences for low-contact or anonymous service interactions and disengagement from relational settings (Fumagalli et al. 2022). Paradoxically, while loneliness increases the desire for connection (Shrum et al. 2023), it may also reinforce the avoidance of the very contexts that could satisfy this need (Kim et al. 2023). Because seeking mental health support often requires entering a socially charged service setting, social loneliness may reduce individuals' willingness to seek such help (Danaher et al. 2023). Hence, we set the following hypothesis:

H1. *Social loneliness negatively predicts help-seeking.*

2.2 | Alienation, Trust, and Help-Seeking

These avoidance-oriented patterns provide a basis for understanding how social loneliness may generalize beyond interpersonal settings, ultimately shaping perceptions of broader institutional contexts such as services (Lee and Chung 2026). In this context, alienation refers to a subjective sense of disconnection from society (Seeman 1959), often characterized by reduced feelings of agency, uncertainty about shared norms, and diminished perceptions of meaning or significance in interactions with others (Tummers 2012). Although related, loneliness and alienation are conceptually distinct. Social loneliness reflects insufficient belonging or integration with others (Weiss 1973), whereas alienation captures a broader perception of disconnection from the norms, expectations, or practices of a wider social system (Brandt et al. 2022). This distinction is important because alienation reflects a more generalized sense of estrangement that extends beyond immediate interpersonal ties, whereas the absence of a close interpersonal bond is characteristic of loneliness (Weiss 1973). Social loneliness may therefore translate into perceptions of institutional disconnection. Heightened sensitivity to rejection and diminished social confidence may generalize beyond interpersonal interactions and shape how lonely individuals interpret institutions' responsiveness and inclusiveness (Leigh-Hunt et al. 2017).

Alienation has typically been conceptualized as a multidimensional construct in which powerlessness reflects the perception that one cannot influence outcomes, whereas meaninglessness reflects difficulty perceiving a broader system as significant, worthwhile, or intelligible (Seeman 1959; Tummers 2012). In healthcare, alienation may therefore arise either when individuals feel unable to act effectively within the system or when the system fails to appear meaningful in relation to their needs. Given that social exclusion

diminishes perceived meaning in life (Stillman et al. 2009), socially lonely consumers may perceive the healthcare system as psychologically distant or lacking meaning in relation to their lived experience. Although alienation has been examined in interpersonal, marketplace, and digital market contexts (Allison 1978; Lee and Chung 2026), less is known about whether social loneliness also fosters alienation from institutional service systems such as healthcare. We therefore propose:

H2. *Social loneliness increases alienation from the healthcare system.*

In service contexts, alienation can manifest as perceptions that systems are unwelcoming (Patrício et al. 2020), challenging to navigate (Mirabito et al. 2025), or misaligned with individuals' needs. Such perceptions are particularly consequential in healthcare, where patient-centric approaches rely on a collaborative relationship (Fleissig et al. 2025) even though service interactions often involve evaluation (McLaren et al. 2023) and emotional vulnerability (Veer and Dobeles 2024). When individuals feel alienated from the healthcare system, they may anticipate poor treatment (Leigh-Hunt et al. 2017), feel less entitled to seek help (Awan et al. 2025), and experience reduced psychological safety (Han et al. 2015) when engaging with providers. As a result, alienation may reduce willingness to engage with the system and seek professional psychological help. We therefore propose:

H3. *Alienation mediates the relationship between social loneliness and help-seeking.*

Trust refers to the expectation that healthcare providers and institutions will act competently, responsively, and benevolently in situations of uncertainty and vulnerability (Anderson and Dedrick 1990). It shapes whether healthcare feels safe and supportive (Brown et al. 2009) and is central to initiating psychological care (Crits-Christoph et al. 2019). In psychological care, where individuals must disclose sensitive concerns, willingness to seek help is especially dependent on trusting that providers and institutions will respond appropriately (McLaren et al. 2023). Trust reduces perceived interpersonal and procedural risk (Cromer et al. 2017), supports engagement (Sharma et al. 2017), and increases willingness to initiate care (Kemp et al. 2023), whereas low trust often leads individuals to hesitate even when need is recognized (LaVeist et al. 2009). Alienation from the healthcare system is likely to weaken trust by making the system appear distant, less responsive, and less oriented toward one's needs, thereby reducing willingness to seek professional help. We therefore propose:

H4. *Trust mediates the relationship between alienation and help-seeking.*

2.3 | Moderating Role of Digital Self-Management Support

Digital self-management support has become an important resource for individuals navigating psychological difficulties by offering accessible ways to monitor symptoms, manage emotions, and obtain psychoeducational guidance (Jena et al. 2026).

These supports can serve as early marketing touchpoints or entry points into the mental health consumer journey and influence how consumers engage with support before interacting with service providers. Yet digital self-management support is not uniform. Self-guided digital support provides private, individualized, and self-paced guidance (Marriott and Pitardi 2024). It may also offer users greater control over how and when they seek help (Borghouts et al. 2021), which can be particularly valuable for individuals who prefer self-reliance or wish to avoid stigma-related barriers to offline help-seeking (Wallin et al. 2018). Self-guided digital support may provide accessible, flexible, and low-pressure ways for consumers to engage with mental health resources (Jena et al. 2026). Such formats may reduce interpersonal visibility, immediate social exposure, and fear of judgment, thereby offering a less socially demanding entry point into the mental healthcare consumer journey (Patrício et al. 2020; Pretorius et al. 2019). By contrast, digital support with peer discussion combines guidance with exchanges among users who share experiences, empathy, and practical advice (Biagianti et al. 2018). Although such formats can foster connection and inclusion, they may also reintroduce social exposure through peer exchanges, thereby increasing opportunities for social comparison or perceived judgment (Bond et al. 2023).

Although they differ in interpersonal exposure, both self-guided and peer-based support represent digital self-management touchpoints that may, in distinct ways, shape whether socially lonely consumers perceive the mental healthcare system as accessible and relevant or distant and alienating. Such supports may reduce institutional distance by helping users observe others' experiences (Biagianti et al. 2018), providing an agentic role (Mirabito et al. 2025), and developing familiarity with psychological concepts (Borghouts et al. 2021). Social loneliness may trigger opposing consumer responses, with some individuals seeking opportunities to restore connection (Shrum et al. 2023) and others avoiding socially demanding contexts perceived as threatening or judgmental (Cacioppo and Cacioppo 2018a). We therefore locate the moderating role of digital self-management support at the loneliness-to-alienation link, as these touchpoints influence how consumers experience the healthcare system at the entry stage of their journey. Accordingly, because both self-guided and peer-based formats function as digital support touchpoints, the relationship between social loneliness and alienation toward the healthcare system should be weaker when consumers are offered digital self-management support than when they receive no digital support. We therefore propose:

H5. *Digital self-management support weakens the relationship between social loneliness and alienation, relative to no digital support.*

All hypotheses are summarized in Figure 1.

3 | Empirical Research

To examine how social loneliness influences consumers' perceptions of the healthcare system and their willingness to seek professional help, we conducted three complementary studies.

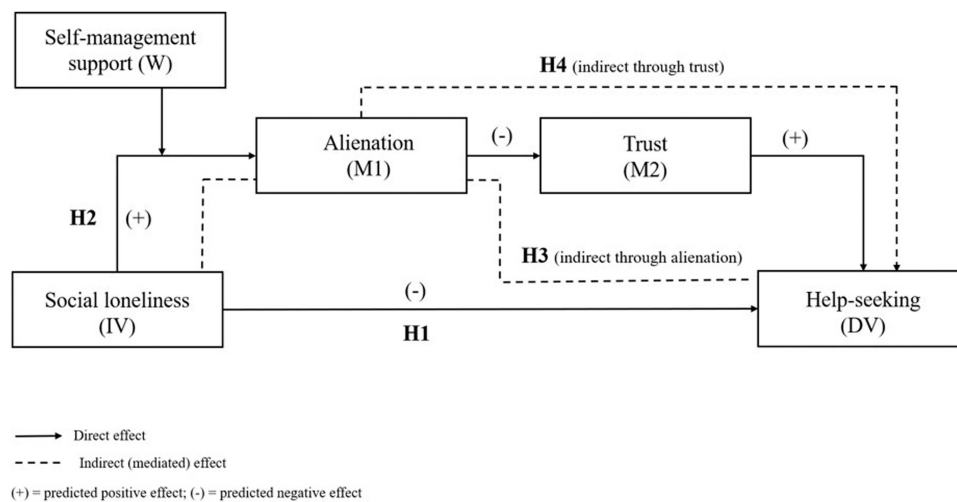


FIGURE 1 | Conceptual framework.

Study 1 used real-life consumer experiences to capture naturally occurring patterns of loneliness, alienation, trust, and help-seeking attitude, thereby offering greater ecological validity. Study 2 and Study 3 used controlled online experiments to isolate the causal impact of different self-management strategies, namely digital apps, online forums, and no support, on these same psychological processes. Moreover, while Study 1 examined the core relationships among loneliness, alienation, and help-seeking attitude, Studies 2 and 3 extended this model by incorporating trust as an additional mediator in a serial mediation framework. Across the three studies, reported mental-health concerns provide the empirical context in which participants may consider psychological support, but they are not part of the focal theoretical model, which centers on social loneliness, healthcare alienation, trust, and help-seeking.

All studies followed the ethical principles of the Declaration of Helsinki (World Medical Association 2013) and the American Marketing Association's guidelines. Participants were adults, gave informed consent, were informed of anonymity and confidentiality, and could withdraw at any time. No personally identifying information was collected.

3.1 | Study 1

Goal and study context: National reports show that over half of Belgian adults experience significant loneliness (Healthy Belgium 2025), and many, especially young adults, women, and financially vulnerable groups, report unmet psychological care needs. Despite a generally accessible healthcare system, gaps in mental-health service uptake and continuity persist (OECD 2023). At the same time, Belgium ranks among the EU's most digitally mature healthcare systems, with rapid progress in digital health integration (eHealth Belgium 2025).

Materials and methods: We developed an online questionnaire including validated multi-item scales from prior research. We measured social loneliness as the independent variable (IV), prior digital self-management experience as the moderator (W), alienation as the first mediator (M), and help-seeking attitude (HSA) as the dependent variable (DV). Unless otherwise noted,

responses were collected on 5-point Likert-type scales ranging from 1 = strongly disagree to 5 = strongly agree. All measurement instruments, including scale items, their origins, and validity and reliability analyses, are provided in Appendix A. It should be noted that the reliability indices of some scales (e.g., help-seeking attitude) are slightly lower than those reported in previous research, potentially due to the online administration format.

Respondents were first asked to report on the type of mental health concerns they were currently experiencing by selecting from a list of categories informed by ICD-11 (WHO 2022). These measures were included to characterize participants' lived psychological context and to enable robustness checks, rather than as focal constructs in the model. After identifying one or more mental health issues, they were asked to indicate which types of self-management approaches they had used to cope with these concerns. These approaches included, among others, digital applications, online forums, books, helplines, and alternative medicine. Based on these responses, we distinguished between participants with prior digital self-management experience and those who had not. This distinction was used to construct a moderating variable capturing participants' experience with digital self-management, allowing us to examine whether real-life familiarity with these approaches influenced the observed effects.

Sample and procedure: Prior to participation, individuals were informed about the general purpose of the study, exploring perceptions and experiences related to healthcare and well-being, and provided their informed consent. The questionnaire was administered online and took approximately 8 min to complete.

Participants were recruited on a voluntary basis (through university mailing lists, social media, and personal contacts). A total of 334 participants completed the survey. After excluding cases that failed the attention-check question ($n = 5$), 329 valid responses were retained for analysis. The final sample included 59.4% women and 39.4% men, with an average age of ($M_{\text{age}} = 27.06$, $SD_{\text{age}} = 10.99$). 31.1% suffered from a diagnosed psychological problem, 48.63% from an undiagnosed problem, and 19% of

participants reported no psychological distress. On a 5-point Likert scale, both social loneliness ($M = 2.41$, $SD = 0.90$) and emotional loneliness ($M = 2.47$, $SD = 0.98$) were, on average, rated slightly below the scale midpoint. These results are broadly consistent with national estimates suggesting that a substantial proportion of Belgian adults experience significant levels of loneliness (Healthy Belgium 2025). The mean level of help-seeking attitude was close to the midpoint ($M = 3.31$, $SD = 0.95$).

Findings: To test our conceptual model, we ran a moderated serial mediation using Hayes Process Macro (model 7, bootstrap = 5000, confidence interval = 95%) (Hayes 2022). The model tested the impact of social loneliness (IV) on the two alienation dimensions (M1: powerlessness and M2: meaninglessness), moderated by prior digital self-management tools (W) and consequently impacting consumers' help-seeking attitude toward seeking professional psychological support (DV). Emotional loneliness was controlled for in the analyses. Results of the serial mediation and the moderated mediations are summarized in Table 1.

While the direct effect of loneliness on help-seeking appears not significant in the model ($\beta = -0.0743$, $p = 0.207$), its impact appeared to depend on the moderating role of prior digital self-management experience. In particular, the findings indicate that the interaction between social loneliness and digital self-management experience on alienation (meaninglessness) was marginally significant, $b = -0.23$, $SE = 0.12$, $t = -1.97$, $p = 0.050$, 95% CI $[-0.463, 0.00]$, but through the meaninglessness dimension of alienation only. Simple-slope analyses showed that among participants with no digital self-management experience, higher social loneliness was associated with significantly higher alienation (meaninglessness) from the healthcare system, $b = 0.17$, $SE = 0.05$,

$t = 3.35$, $p = 0.001$, 95% CI $[0.07, 0.27]$. In contrast, when participants had a digital self-management experience, the effect of social loneliness on alienation (meaninglessness) was not significant, $b = -0.06$, $SE = 0.11$, $t = -0.55$, $p = 0.582$, 95% CI $[-0.2748, 0.1546]$. In other words, even when experiencing social loneliness, individuals who used digital help did not exhibit increased perceived alienation from the healthcare system, which may ultimately strengthen their likelihood of seeking professional help when needed. As in the upcoming Studies 2 and 3, the powerlessness dimension of alienation did not significantly mediate these relationships. These results are summarized in Table 1.

Regarding the moderating role of digital self-management experience (see Figure 2), the indirect effect was significant in the no digital self-management experience condition (effect = -0.065 , BootSE = 0.027, 95% CI $[-0.122, -0.020]$) but not among

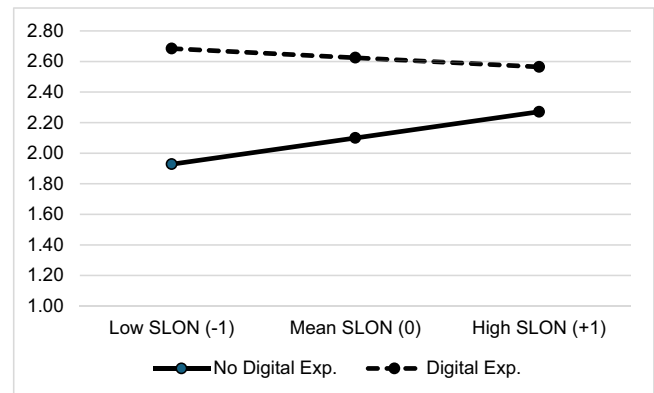


FIGURE 2 | Interaction between social loneliness and digital self-management approach.

TABLE 1 | Findings from the moderated mediation predicting help-seeking attitude (Study 1).

Outcome	Predictor	<i>b</i>	SE	<i>t</i>	<i>p</i>	95% CI
Alienation (meaninglessness)	Constant	2.10	0.14	14.8	0.000	[1.82, 2.38]
	SLON	0.17	0.05	3.35	0.001	[0.07, 0.27]
	Digital Exp.	0.53	0.32	1.64	0.103	[-0.11, 1.16]
	SLON × Digital Exp.	-0.23	0.12	-1.97	0.05	[-0.46, 0.00]
	ELON (covariate)	0.11	0.05	2.46	0.01	[0.02, 0.19]
Model $R^2 = 0.071$, $F(4, 324) = 6.23$, $p < 0.001$						
Alienation (powerlessness)	Constant	1.73	0.13	12.8	0.000	[1.47, 2.00]
	SLON	0.30	0.05	6.20	0.000	[0.21, 0.40]
	Digital Exp.	-0.12	0.30	-0.41	0.685	[-0.72, 0.48]
	SLON × Digital Exp.	0.05	0.11	0.45	0.654	[-0.17, 0.27]
	ELON (covariate)	0.07	0.04	1.65	0.1	[-0.01, 0.15]
Model $R^2 = 0.172$, $F(4, 324) = 16.83$, $p < 0.001$						
HSA	Constant	5.08	0.21	23.3	0.000	[4.65, 5.51]
	SLON	0.03	0.06	0.48	0.630	[-0.09, 0.15]
	Alienation (meaninglessness)	-0.16	0.08	-2.16	0.031	[-0.32, -0.02]
	Alienation (powerlessness)	-0.42	0.08	-5.2	0.000	[-0.58, -0.26]
	ELON (covariate)	-0.11	0.05	-2.07	0.04	[-0.21, -0.01]
Model $R^2 = 0.202$, $F(4, 324) = 20.49$, $p < 0.001$						

Note: Coefficients are unstandardized. Confidence intervals are bias-corrected bootstrap intervals based on 5000 resamples. Abbreviations: ELON, emotional loneliness; HSA, helpseeking attitude; SLON, social loneliness.

participants with digital self-management experience condition (effect = 0.023, BootSE = 0.048, 95% CI [−0.057, 0.132]). The index of moderated mediation was significant (index = 0.088, BootSE = 0.056, 95% CI [0.0003, 0.2203]), suggesting that the indirect effect of social loneliness on help-seeking attitude depends on participants' prior digital self-management experience.

Further analyses showed that including age as an additional covariate did not materially alter the results. The interaction between social loneliness and digital self-management experience remained marginally significant ($b = -0.229$, $p = 0.053$), and the pattern of conditional indirect effects remained similar to the model without age.

In the questionnaire, we also assessed which mental health issues participants were experiencing in real life. Because our mental health indicators (based on the ICD-11; see Appendix A) were coded as yes/no variables, participants could report one or more co-occurring conditions. We therefore added all mental-health categories as covariates to test whether the model held when controlling for (overlapping) symptom profiles. The results remained highly similar, and the moderated mediation index also remained significant (index = 0.10, 95% CI [0.01, 0.23]), confirming that the patterns remain robust after accounting for mental-health issues.

Finally, an additional analysis using a binary logistic regression was conducted to examine whether help-seeking attitude was associated with actual help-seeking behavior. The model was statistically significant, $\chi^2(1) = 18.12$, $p = 0.000$. Attitude toward help-seeking was a positive and significant predictor of having consulted a psychologist ($B = 0.51$, $SE = 0.12$, $Wald = 16.97$, $p = 0.000$). The odds ratio indicated that each one-point increase in attitude increased the odds of having sought help by approximately 67% ($OR = 1.67$). The model explained between 5.4% (Cox & Snell R^2) and 7.2% (Nagelkerke R^2) of the variance and correctly classified 61.7% of cases.

Overall, Study 1 shows that individually perceived loneliness increases feelings of alienation toward the healthcare system, which in turn reduces help-seeking attitudes. However, prior digital self-management experience appears to buffer this effect, reducing the negative impact of loneliness on alienation. While these results suggest that the observed relationships emerge in a setting based on consumers' real lived experiences, Study 2 adopts an experimental design to examine whether different forms of digital self-management support shape alienation and help-seeking, compared with a non-use condition, thereby strengthening internal validity.

3.2 | Study 2

Materials and methods: Study 2 employed a between-subjects online experiment with three experimental conditions. Participants were randomly assigned to one of three self-management scenarios: (1) no help, (2) use of a certified digital mental-health application, or (3) use of an online social support group. Across all conditions, the introductory scenario, the content presented, and the outcome information were held constant to ensure comparability. All participants first read the same scenario

designed to be broad enough for general identification, i.e., feeling persistently emotionally drained, stressed, and unable to concentrate, prompting them to consider next steps (see Appendix B). Participants were then exposed to their assigned condition. In the no-help condition, participants read that they chose not to take any action and would simply wait to see whether the situation improved on its own. In the digital-app condition, the tool was described as a certified mental health mobile application, reflecting current regulatory standards in many European countries. The online social-support condition involved an online peer-support group hosted on a reputable, moderated platform where individuals experiencing similar emotional difficulties shared experiences, exchanged coping strategies, and responded to one another's posts. In all three conditions, participants were told that the outcome of their current approach (no help, digital app, online forum) was uncertain at this stage, ensuring that expectations about effectiveness did not differ systematically across conditions. The complete scenarios can be found in Appendix B.

Following the scenario, participants reported their intended behaviors and completed the same measures as in Study 1, assessing their perceptions of the healthcare system and perceived loneliness. All constructs from Study 1 were measured using the same validated scales as in the previous study. The full list of items, scale origins, and reliability and validity analyses are provided in Appendix A.

Participants were recruited through Prolific and received the platform's recommended fair monetary compensation for their participation. An attention check was included to ensure response quality, and no respondent failed this criterion. The final sample consisted of 280 participants residing in the United Kingdom (UK). The UK was selected as a complementary study context: although culturally and geographically close to Belgium (Study 1), the UK differs in several relevant ways, including a more centralized and publicly funded mental healthcare system through the NHS and a documented rise in demand for psychological support that continues to outpace service capacity (NHS England 2024).

A realism check confirmed that all three conditions were perceived as equally realistic ($p = 0.687$). Manipulation checks showed that the digital app ($M = 4.02$, $SD = 1.19$) and online support ($M = 3.78$, $SD = 1.31$) conditions were viewed as significantly more digital than the no-help condition ($M = 2.55$, $SD = 1.04$; $p = 0.001$). As expected, the online support condition was perceived as the most group-based ($M = 4.38$, $SD = 0.85$), compared with both the no-help ($M = 2.36$, $SD = 1.07$) and digital app ($M = 1.73$, $SD = 0.89$) conditions ($p = 0.001$). Confound checks showed that social loneliness did not differ across experimental conditions ($p = 0.434$).

The final sample had a mean age of 47.02 ($SD = 13.36$) with 53.2% women, 45.4% men, and 0.7% non-binary/others. In total, 61% of participants reported experiencing psychological distress, allowing for sufficient variety in mental health status to test our model across diverse psychological profiles. The mean level of social loneliness was 3.53 ($SD = 1.10$), and the mean help-seeking attitude was 3.47 ($SD = 0.97$).

Findings: We conducted a moderated serial mediation analysis (PROCESS Model 85; 5000 bootstrap samples; 95% confidence interval), using social loneliness as the independent variable (IV), self-management approach (no prior help, digital app, online forum) as the moderator (W), alienation as the first mediator (M1), trust as the second mediator (M2), and help-seeking attitude (HSA) as the dependent variable (DV).

As in Study 1, the model was significant for the meaningfulness dimension of alienation but not for the powerlessness dimension. In particular, findings revealed that social loneliness significantly predicted alienation (meaninglessness) ($b = 0.14$, $p = 0.010$). Yet, this effect was moderated by the self-management approach ($X \times W$: $F(2, 273) = 8.25$, $p < 0.001$). Simple slopes indicated that greater social loneliness increased feelings of alienation from the healthcare system in the no-prior-help condition ($b = 0.14$, $p = 0.011$), whereas greater social loneliness decreased alienation from the healthcare system when participants were provided with a digital app ($b = -0.13$, $p = 0.017$). The interaction was marginally significant in the forum condition (0.06). Moderated mediation analyses showed that the indirect effect through alienation differed across groups (index = 0.061, 95% CI [0.0048, 0.1467]), indicating that digital help may disrupt the alienation pathway that would otherwise reduce help-seeking attitude. For the serial pathway, the indirect effect was negative in the no-help condition and non-significant in the digital app condition, consistent with the idea that digital apps interrupt the negative progression from isolation to help-seeking. Both mediators predicted help-seeking attitude: alienation negatively ($b = -0.23$, $p = 0.026$) and trust positively ($b = 0.35$, $p < 0.001$), but only through the meaningfulness dimension of alienation. The detailed results are summarized in Table 2.

Additional analyses showed that when running the same model including age as a covariate, the results remained largely unchanged. Age was not significantly related to alienation, trust, or help-seeking (all $ps > 0.26$), and the pattern and significance of the moderated mediation effects remained unchanged.

Building on Study 2, Study 3 extends the model by examining help-seeking intentions rather than attitudes as the dependent variable, thereby also capturing individuals' behavioral intentions. Furthermore, as Study 2 contains potential confounds in the manipulation of self- versus group-based approaches (i.e., slightly different format and certification), Study 3 uses an improved manipulation to more clearly isolate the intended differences.

3.3 | Study 3

To measure the impact of loneliness and alienation on help-seeking intentions, and to enhance the robustness and generalizability of our findings, Study 3 aimed to replicate Study 2 using a different sample, refined measurement scales, and improved scenarios. As in Study 2, we employed a between-subjects experimental design with three self-management conditions: (1) no help, (2) digital self-guided support, and (3) digital support with peer discussions.

TABLE 2 | Moderated serial mediation of social loneliness on help-seeking.

Outcome	Predictor	Self-management condition	Effect (b)	SE	95% CI
Direct effect	SLON → HSA	No prior help	0.12	0.09	[−0.05, 0.30]
	SLON → HSA	Digital app	0.30	0.09	[0.12, 0.49]
	SLON → HSA	Online forum	0.25	0.09	[0.07, 0.43]
Indirect effect via alienation	SLON → ALI → HSA	No prior help	−0.031	0.022	[−0.09, −0.00]
	SLON → ALI → HSA	Digital app	0.030	0.022	[−0.00, 0.08]
	SLON → ALI → HSA	Online forum	−0.023	0.017	[−0.06, 0.00]
Serial indirect effect	SLON → ALI → TRUST → HSA	No prior help	−0.0065	0.0045	[−0.02, 0.00]
	SLON → ALI → TRUST → HSA	Digital app	0.0062	0.0051	[−0.00, 0.02]
	SLON → ALI → TRUST → HSA	Online forum	−0.0047	0.0038	[−0.01, 0.00]

Note: Coefficients are unstandardized. Confidence intervals are bias-corrected bootstrap intervals based on 5000 resamples. Abbreviations: ALI, alienation (meaninglessness); HSA, help-seeking attitude; SLON, social loneliness.

Participants and procedure: The final sample consisted of 214 respondents recruited through Prolific in exchange for a monetary compensation. Participants were randomly assigned to one of three groups using Qualtrics: no help condition ($n = 70$), digital self-guided support condition ($n = 73$), and digital support with peer discussions condition ($n = 71$). The sample had an average age of 30.49 years ($SD = 10.01$), allowing us to test the robustness of previous findings on a moderately aged population, compared to the younger sample of Study 1 and the older sample of Study 2. A sensitivity power analysis conducted in G*Power 3.1.9.7 (Faul et al. 2009) indicated that the final sample of 214 participants provided 95% power to detect interaction effects as small as $f^2 = 0.073$ at $\alpha = 0.05$. Thus, the sample size was adequate for testing the hypothesized moderation effects.

Participants were exposed to a scenario that differed only in the type of self-management approach adopted. As in Study 2, all three conditions shared the same initial context and highlighted the uncertain outcome of maintaining the current approach (see Appendix C). In the no-help condition, participants were asked to imagine continuing to manage the situation on their own without external support. In the two digital conditions, participants were presented with a certified digital application featuring structured, guided modules. In the self-guided support condition, the application was described as an individual tool used independently, without any interaction with others. In contrast, in the digital support with peer discussions condition, the same application included a social component, allowing users to engage in regular exchanges with peers. This design ensured that both digital conditions were equivalent in structure, certification, and guidance, differing only in the presence or absence of peer interaction. Manipulation checks confirmed that the peer discussion condition was perceived as more group-based ($M = 3.70$, $SD = 1.15$), when compared with self-guided condition ($M = 2.70$, $SD = 1.52$) ($p = 0.000$). To further strengthen internal validity, confound checks indicated that the three scenarios did not differ significantly in perceived professional support ($p = 0.216$) or in how guided and structured they perceived the approach to be ($p = 0.351$). Finally, a realism check confirmed that all three conditions were perceived as equally realistic ($p = 0.473$).

Measures: Study 3 extended the model by including help-seeking intentions (HSI) rather than attitude as a dependent variable to measure the effect of alienation on individuals' behavioral intentions. HSI was measured using Hammer and Spiker (2018) scale. To improve ecological validity and measurement robustness, Study 3 relied on refined and alternative validated scales for trust and alienation (see Appendix A).

Findings: As in Study 2, we conducted a moderated serial mediation analysis using Hayes' PROCESS macro to test the model in Figure 1 (Model 85; 5000 bootstrap samples; 95% confidence interval). In line with previous findings, results of Study 3 first indicate that social loneliness significantly predicted alienation (meaninglessness) ($b = 0.25$, $SE = 0.07$, $t = 3.44$, $p = 0.001$, 95% CI [0.11, 0.39]) but not powerlessness ($p > 0.05$). With the meaninglessness dimension of alienation, the interaction between social loneliness and the self-management condition was marginally significant overall ($\Delta R^2 = 0.020$, $F(2, 207) = 2.57$, $p = 0.079$), with a

significant interaction for the comparison involving the digital app with peer community ($b = -0.24$, $SE = 0.11$, $t = -2.21$, $p = 0.028$, 95% CI [-0.46, -0.03]).

Simple slope analyses showed that when participants received no help, higher social loneliness was associated with significantly higher perceived alienation ($b = 0.25$, $SE = 0.07$, $t = 3.44$, $p = 0.001$, 95% CI [0.11, 0.39]). A similar but weaker positive relationship was observed when participants used a self-guided digital app without social interactions ($b = 0.19$, $SE = 0.09$, $t = 2.13$, $p = 0.034$, 95% CI [0.01, 0.37]). In contrast, when participants were exposed to a digital app including peer discussions, the effect of social loneliness on alienation was not significant ($b = 0.01$, $SE = 0.08$, $t = 0.10$, $p = 0.918$, 95% CI [-0.16, 0.17]) (see Figure 3). These findings indicate that the presence of digital apps, including peer interactions, attenuates the relationship between loneliness and perceived alienation from the healthcare system, ultimately increasing help-seeking intentions.

Regarding the mediations, the model predicting help-seeking intention was significant ($R^2 = 0.291$, $F(8, 205) = 10.49$, $p = 0.000$), supporting the findings of Studies 1 and 2. While social loneliness did not have a direct effect on help-seeking intention across conditions (all $ps > 0.05$), results showed that alienation from the healthcare system was strongly and negatively associated with trust ($b = -0.48$, $SE = 0.06$, $t = 8.21$, $p < 0.001$, 95% CI [0.36, 0.60]). In turn, trust was positively associated with help-seeking intention ($b = 0.51$, $SE = 0.10$, $t = 4.91$, $p = 0.001$, 95% CI [0.30, 0.71]).

Finally, the serial indirect effect through alienation and trust was significant in the no-help condition (effect = 0.061, BootSE = 0.024, 95% CI [0.020, 0.115]), but not in the self-paced digital app condition (effect = 0.047, BootSE = 0.030, 95% CI [-0.007, 0.111]) or the peer-based digital condition (effect = 0.002, BootSE = 0.021, 95% CI [-0.040, 0.045]). The index of moderated mediation for this serial pathway was significant for the peer-based condition (index = -0.059, BootSE = 0.032, 95% CI [-0.128, -0.004]), further indicating that the full mediational chain from loneliness to help-seeking intention through alienation and trust is disrupted when digital solutions include a peer community. Additionally, as a robustness check, we estimated an alternative serial mediation model reversing the order of trust and healthcare-system alienation. Although the alternative model yielded significant conditional indirect effects, it did not

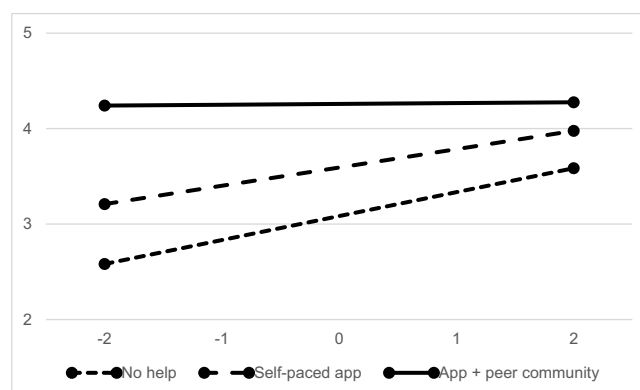


FIGURE 3 | Interaction between social loneliness and self-management approach.

reproduce the significant moderated serial mediation observed in our hypothesized model.

Overall, Study 3 supports the proposed serial pathway by showing that social loneliness is associated with lower help-seeking intentions through higher alienation and lower trust. At the same time, it qualifies Study 2 by showing that, when the digital conditions are held constant in structure, certification, and guidance, the peer-based format most clearly disrupts the loneliness-to-alienation pathway.

4 | Discussion and Theoretical Contributions

Across a survey and two experiments, this research shows that social loneliness undermines mental healthcare help-seeking through an institutional pathway. The central theoretical insight is that the consequences of loneliness extend beyond interpersonal relationships, as social disconnection can spill over into consumers' relationship with the healthcare system, fostering alienation, weakening trust, and discouraging engagement with professional care. Thus, an individual experience of social disconnection can develop into broader disengagement from the formal institutions designed to provide support.

The primary contribution of this research is therefore to advance loneliness research beyond its usual interpersonal focus by showing that social disconnection can extend into consumers' relationships with a formal service system. Prior work has mainly emphasized the interpersonal consequences of loneliness, such as rejection sensitivity, lower social confidence, and withdrawal from threatening interactions (Kim et al. 2023). Our findings show that these consequences also shape whether consumers perceive the healthcare system as a relevant and meaningful source of support in their customer journey. In our studies, loneliness was linked not only to lower help-seeking but also to a stronger sense of institutional disconnection that ultimately reduced openness to professional care. In other words, loneliness operates not only as an individual emotional state but also as a source of institutional disconnection that shapes consumers' engagement with the healthcare ecosystem, contributing to service research focused on reducing psychological burdens for vulnerable consumers (Hammedi et al. 2024).

This institutional pathway is further specified by identifying meaninglessness, rather than powerlessness, as the most consequential dimension of the healthcare system alienation. While alienation from the healthcare system generally concerns estrangement from a broader institutional environment (Lee and Chung 2026), our research shows that what matters most is not simply the perceived powerlessness associated with alienation, i.e., that lonely consumers feel unable to act (Tummers 2012), but rather that the healthcare system loses psychological meaning and resonance. The barrier thus appears less about a lack of control and more about difficulty in perceiving the system as understandable, relevant, or worth engaging with (Stillman et al. 2009). It suggests that institutional disengagement may emerge when consumers no longer perceive healthcare as a meaningful route for addressing their distress. The results also clarify why trust plays a central downstream

role. When the system feels distant and stripped of meaning, trust becomes more difficult to establish, and without trust, movement toward professional care becomes less likely (Cromer et al. 2017). Together, alienation and trust explain how interpersonal disconnection can be translated into reduced engagement with a formal service institution.

Beyond this central contribution, the findings also identify digital self-management support as a potential means of interrupting the institutional disengagement associated with social loneliness. Across the three studies, digital self-management tools emerged as potential disruptors of the pathway through which social loneliness fostered alienation and downstream disengagement from care. These findings position digital self-management support not merely as an adjunct to treatment, but as an important service or marketing touchpoint earlier in the consumer journey and a potential entry point into care before direct contact with service providers, consistent with prior work describing digital tools as stepping stones into formal care (Bond et al. 2023). Aligned with patient-centric and integrated care ecosystems (Moorman et al. 2024), our results show that in the absence of support, loneliness is associated with a negative cycle: increased alienation from the healthcare system, reduced trust in institutions, and lower willingness to seek professional help. Digital support may help interrupt this cycle by creating an intermediate and comparatively accessible form of engagement before consumers approach professional services directly. Yet, the findings invite a more nuanced interpretation of which type of self-management support is most effective.

Study 2 suggested that a self-guided digital tool most clearly neutralized the loneliness-to-alienation effect, whereas Study 3 showed that this pathway was most likely disrupted when digital support included peer discussions. The difference between Studies 2 and 3 can be understood considering the ambivalent nature of loneliness. Social loneliness can motivate consumers to seek reconnection (Shrum et al. 2023), but it can also make social exposure feel threatening, effortful, or judgmental, leading some consumers to avoid social relationships altogether (Cacioppo and Cacioppo 2018a). Self-guided support may be particularly useful when lonely consumers seek privacy, autonomy, and a low-pressure way to approach psychological support without immediate interpersonal exposure. Peer-enabled support may be particularly useful when lonely consumers seek social validation, shared understanding, and evidence that others face similar difficulties. The key distinction may not be whether one digital format is universally superior, but whether a given format matches consumers' orientation toward support at the entry stage of the care journey. These findings reinforce a patient-centric view of mental healthcare by suggesting that touchpoints and care pathways should be designed around consumers' differing psychological needs and orientations toward support rather than assuming a one-size-fits-all route into care (Berry et al. 2024).

More broadly, the findings suggest that consumer vulnerability can shape engagement with marketplace institutions before any direct service encounter occurs. Social disconnection may influence whether a formal service system feels meaningful and responsive, thereby transforming a personal psychological state into a barrier to marketplace participation. This perspective

shifts attention from barriers located solely within consumers or service structures toward the psychological relationship that develops between consumers and institutions. Early digital touchpoints may therefore influence consumer engagement not only by improving convenience and access, but also by reducing institutional distance and reinforcing perceptions that formal services are relevant and trustworthy. Although examined in healthcare, this mechanism may also apply to other high-stakes service settings, such as financial services and public services, in which vulnerable consumers must approach complex institutions under conditions of uncertainty and dependence.

5 | Managerial and Policy Implications

The present findings have several implications for managers and policymakers seeking to improve mental health care engagement among vulnerable consumers. First, digital self-management tools should be positioned not merely as complements to treatment, but as marketing touchpoints that facilitate entry into care. Because socially lonely consumers may perceive the healthcare system as distant or difficult to approach, private, accessible, and easy-to-use digital entry points can reduce friction in the consumer journey before direct contact with providers.

Second, healthcare organizations should design digital entry points as a portfolio rather than as a single standardized pathway. Because lonely consumers may either seek reconnection or avoid socially demanding interactions, the implication is not simply to choose between self-guided and peer-enabled support, but to let consumers move between different levels of social exposure as they become ready to engage. For instance, services could begin with private self-guided modules and then offer optional peer features or guided community spaces, while ensuring that each pathway clearly connects users to professional support.

Finally, trust-building and meaningfulness should be treated as explicit service and policy goals. Because the key barrier was meaninglessness rather than powerlessness, improving access alone may be insufficient if care pathways still feel unclear or psychologically unsafe. Digital tools should therefore provide clear guidance, credible structure, and low-judgment engagement, and be embedded in coordinated healthcare ecosystems so they connect consumers to broader care systems rather than operate in isolation.

6 | Limitations and Avenues for Future Research

Although our research includes real-life consumer experiences and is replicated under controlled experimental conditions with participants representing diverse mental health situations, it still faces limitations.

First, our studies rely on self-reported measures of loneliness, alienation, trust, and help-seeking intentions. While Czaja et al. (2021) recommend assessing loneliness as a subjective perception rather than through network size, such measures may still be influenced by social desirability, mood, or individual

interpretations of mental health terminology. Future research could incorporate behavioral data (e.g., actual app usage, real help-seeking) or physiological indicators. Similarly, another possible limitation of our measurement instruments is that alienation appears to be a multifaceted construct with no universally accepted measurement scale, making its accurate assessment context dependent.

Second, studies 2 and 3 identified different self-management formats as the most effective. While both support the broader buffering role of digital self-management support, future research should examine different responses to loneliness and moderating variables, as some consumers may avoid socially demanding environments, whereas others may seek reconnection.

Third, the cross-sectional design limits strong causal inference. The temporal unfolding of loneliness, alienation, trust, and help-seeking cannot be fully established. Longitudinal research should examine how ongoing engagement with digital self-management tools influences these processes over time in real-world contexts.

Acknowledgments

The authors acknowledge the use of ChatGPT Plus (accessed in 2025 and 2026) to improve the English language and clarity of the written text. All AI assisted text was reviewed and edited by the authors, who take full responsibility for the final content.

Funding

The authors have nothing to report.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The authors have nothing to report.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.

Supporting File: mar70254-sup-0001-P_amp_M_Special_Issue_Supporting_Information_Loneliness_and_Mental_Health_R1.docx.