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Consumer (dis)engagement coping profiles using online services in managing health-related stressors

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Abstract
Online health services are a rapidly growing coping resource for consumers to draw on in managing health-related stressors. We apply a (dis)engagement coping lens to understand consumer coping, identify the distinct purposes of consumer coping captured in six coping scales, and develop an inventory (via multiple studies), to measure consumer positioning on these scales. In a final survey (N = 623), we assess the extent to which consumers use online health services, the ways in which they draw on these services as coping resources using the 6-scale inventory and the influence of health status on coping efforts. We demonstrate that consumer engagement coping efforts with respect to health-related stressors are largely directed toward direct management of health stressors (e.g., active planning). We also identify how consumers combine multiple ways of coping through distinguishing three coping profiles based on the enactment and perceived helpfulness of the six coping scales and current health status. Our profiles emphasize the need to understand the progress of health conditions as a determiner of coping efforts. Practitioners and policymakers can use this structured understanding of coping efforts to strategically plan future service provision, although some caution is noted with respect to health inequalities.

KEYWORDS
coping profiles, disengagement coping, engagement coping, health-related stressors, online services

1 | INTRODUCTION

Maintaining good health and/or living with illness are major stressors for consumers (Cohen et al., 2019). Consumers cope with health-related stressors in multiple and diverse ways, which can be more or less effective at reducing stress, promoting psychological wellbeing, and improving health outcomes (Buizza et al., 2022; Kavčič et al., 2022). Coping represents our efforts to deal with the “adaptational demands” and associated emotions that we face on a daily basis (Lazarus, 2006, p. 10). That is, we must constantly make adjustments to the way that we live as our environment changes (e.g., physical, financial, relational). The differences in these adjustments, that is, consumer coping behaviors, in relation to stressors, that is, environmental changes, can facilitate or hinder both consumers (e.g., in their ability to make treatment decisions) and service providers (e.g., in terms of efficient and effective service delivery) alike (Lifford et al., 2015). Coping behaviors are shaped by a consumer’s appraisal of both the stressor (e.g., level of potential harm or threat) and the...
resources that they have available to manage that stressor. For example, depending on the outcome of such appraisals, a consumer may cope through active planning of how to manage a stressor or use wishful thinking to detract from the stressor (Simione et al., 2022), but the extent to which they can adopt such coping efforts may be limited by, for example, a lack of tangible resources.

The coping resources available for consumers are increasingly offered online (El-Manstrly et al., 2021), especially in online health services in which there has been significant public and private investment (e.g., an estimated $21.6 billion was invested in digital health companies in 2020: Deloitte, 2021) alongside policy emphasis on self-management of health through digital solutions (Neher et al., 2022; Rigby et al., 2011). Indeed, industry predictions indicate that online health service provision is likely to keep accelerating over the next few years to both expand virtual care delivery and empower consumers to take (even) more control of their health (Deloitte, 2021). However, at the same time, we lack an understanding of how online health services are differentially used by consumers as coping resources (Kavčič et al., 2022). Some consumers will combine online consultation services with a healthcare professional with visiting online forums dedicated to their condition. Others may also rely on interactive decision tools to personalize treatment plans or use online resources to find support for denial or wishful thinking (Keeling et al., 2019). Such differences between consumers are an important factor in the successful (or otherwise) implementation of technologically innovative health services and their associated benefits to consumers and providers (Greenhalgh et al., 2017).

Further, while health consumers may usefully draw on online resources to boost their coping ability (Fletcher-Brown, Turnbull et al., 2021), yet, others may be disenfranchised due to lack of ability to engage with such resources (Keeling et al., 2019). It is imperative that we gain an in-depth understanding of consumer coping behaviors in the face of digital healthcare service growth to tackle challenges in the planning and management of service provision alongside an enhanced insight into the dependencies of consumers on online services as coping resources. Such insights will contribute to the body of evidence needed for healthcare providers and policymakers to ensure not only effective service provision that addresses need tailored to the consumer but also the sustainable future of online health service provision (Neher et al., 2022).

To address these issues, we turn to theorizing on (dis)engagement coping (Carver & Connor-Smith, 2010; Tobin et al., 1989). Engagement coping is “aimed at dealing with the stressor or related emotions” and disengagement coping is “aimed at escaping the threat or related emotions” (Carver & Connor-Smith, 2010, p. 685). In other words, consumers adapt their coping efforts either toward or away from the health challenges that they may be facing. This may depend on the nature of the stressor, as well as the choice of coping resources. For example, where consumers perceive a lack of consumer control over a stressor (e.g., diagnosis of a chronic condition such as diabetes), they may use engagement coping through participating in discussions in an online forum (Keeling et al., 2015; Yi & Baumgartner, 2004). In recent years, there has been a rapid growth in the number of online services and, therefore, in the scope of coping resources available. For example, health services providers offering both self-management tools, such as preparation tools for forthcoming consultations, alongside virtual consultations. Other examples include consumer-led services such as online health-focused forums, or collaborative services such as virtual buddying. Yet, there is a general consensus among scholars that there is a lack of a comprehensive understanding of how consumers draw on online services as coping resources in managing stressors (Holmes et al., 2020; Lischetzke et al., 2022; Yi & Baumgartner, 2004; Zhao et al., 2020). Furthermore, there is a gap in our knowledge of how consumers combine different coping strategies simultaneously (Fisher et al., 2021; Lazarus, 2006). For example, short-term wishful thinking in the face of a cancer diagnosis can help to protect consumers from the immediate effects of shock, while enacting active planning for the treatment steps ahead.

This paper seeks to contribute to the evidence base on consumer coping behaviors with respect to online health service provision that policymakers and practitioners need to inform planning for effective and sustainable service provision (Greenhalgh et al., 2017; Neher et al., 2022). First, we address the lack of a structured understanding of consumer coping (Lischetzke et al., 2022; Zhao et al., 2020). We achieve this by adapting the (dis)engagement framework and then identifying the purposes to which consumers draw on online health services as coping resources and capturing these purposes in six factors based on enacted coping behaviors. We conceptually develop and empirically evidence a systematic inventory of how consumers use online health services in terms of (dis)engagement coping behaviors. We, then, empirically demonstrate these coping behaviors, including the extent of engagement coping behaviors, particularly active planning and involvement in decision making, and the nature of disengagement behaviors. Second, we address the need for appropriate technology-specific consumer differentiation (Hollebeek et al., 2019) and a better understanding of (dis)engagement coping strategies integration by shedding further light on the ways in which consumers adopt and combine such coping behaviors. We do so by identifying coping profiles based on situational clusterings. That is, we demonstrate the role of online health services in (dis)engagement coping strategies, by empirically identifying three coping profiles based on enactment of coping behaviors, perceived helpfulness, and health status. We, thus, establish how our inventory can be applied strategically to identify health consumer coping profiles and the potential consequences for consumer health journeys and widening the potential for more individual patient-centered health service delivery.

2 | CONCEPTUAL FOUNDATIONS

A central theme of health services research is understanding how some people can cope with major health issues while others are seemingly unable to cope with relatively minor health issues. That is, some consumers adjust well even in the face of traumatic ill-health...
circumstances and others demonstrate significant emotional and interpersonal decline, with concomitant impacts on health outcomes. This variation in the ability to cope with health issues is understandable. The adaptive tasks required to adjust to changing health circumstances encompass: managing pain and symptoms; maintaining personal worth and growth opportunities; managing relations with important others (including healthcare professionals); pursuing recovery; and regulating fear and uncertainty about the future, including threats to life (Keeling et al., 2015; Mols et al., 2005). It is well established that variation in coping is largely determined by how consumers appraise their situation. That is, the way in which consumers interpret the significance of what is happening to them in terms of a primary appraisal (i.e., as a harm, threat, challenge, or benefit) and a secondary appraisal of what can be done to prevent harm/threat, meet challenges or realize benefits (i.e., is the situation amenable to change or perceived as manageable?) (Lazarus, 2006).

The results of primary and secondary appraisals converge to influence consumer coping choices (Folkman et al., 1986). That is, if the situation is appraised as a high threat (e.g., a breast cancer diagnosis, which is life-threatening), a consumer may choose to cope through distancing themselves from the situation (e.g., avoid discussions about the diagnosis), but if the situation is also appraised as being amenable to change (e.g., the likelihood of successful treatment), they may combine the distancing coping strategy with planful problem-solving (e.g., in collaboration with a healthcare professional), or seeking out social support (e.g., joining a breast cancer forum). Emotions and their regulation play an important part in this coping process. They serve as cues to a consumer in terms of both what is important to them and how well they are coping with the situation (Lazarus, 2006). A further complication is that a consumer will draw on past experience and, thus, may approach a familiar situation initially using a “tried and tested” set of strategies. In the case of health, the initial heuristic may be to consult a doctor, others may first seek out more information. However, as the situation progresses, the initial heuristic may be challenged (i.e., in terms of its helpfulness) and the coping strategy reappraised (e.g., seeking second opinions or rejecting current treatment plans). It is argued that the way that a consumer appraises and subsequently copes with a stressor is what mediates between the stressor and outcome—not the stressor itself. Understanding this appraisal-coping process gives us the power to influence cognitions, emotions, and behaviors both socially and clinically (Lazarus, 2006).

2.1 | (Dis)engagement coping with online health services

Health and marketing researchers agree that to gain a more nuanced understanding of coping behaviors requires additional in-depth insights into the breadth, forms, and combinations of coping behaviors that consumers adopt, as well as the situational dependency of coping behaviors (Holmes et al., 2020; Yi & Baumgartner, 2004). Yet, researchers from both domains agree that we lack an overall structured view of how consumers purposefully draw on online services as coping resources in managing stressors and the situational determinants of those coping choices (Holmes et al., 2020; Lischetzke et al., 2022; Yi & Baumgartner, 2004; Zhao et al., 2020). Theorizing on engagement and disengagement coping helps us frame and understand the ways in which consumers may use online health services as coping resources (Carver & Connor-Smith, 2010; Tobin et al., 1989). Engagement coping is directed at approaching the health stressor and/or related emotions, while disengagement coping is directed at avoiding confronting a health threat and the emotion that it triggers. For example, in response to the distress of postoperative pain, breast cancer patients may vary in their coping response by using positive reframing, that is, engagement coping, or denial, that is, disengagement coping (Fisher et al., 2021). Recognition of this fundamental conceptual dichotomy sheds light on the potential breadth of purpose and associated forms of enacted coping behaviors. That is, purpose can be understood in terms of (dis)engaging with either the health stressor or one’s emotional reaction to the health stressor. Then, the multiple ways that such purposeful coping is directed can be further defined in multiple specific coping behaviors that can be adopted singly or in combination (i.e., in coping profiles). Additionally, conceptually engagement and disengagement coping are not competing factors but can work together as integral parts of the whole coping function, as determined by the health stressor(s) context (Fisher et al., 2021; Lazarus, 2006).

2.2 | The purpose of coping using online health services

Online health services can be utilized in multiple ways by consumers in coping with their health issues (Martín-García et al., 2021). There is a solid body of literature that examines consumers’ ability to cope with online services (e.g., adapting to a new service provision) (Heller et al., 2021; Hollebeek et al., 2021), but there is a lack of research that examines how consumers cope by purposefully drawing on online services as resources in managing stressors (Zhao et al., 2020). Recent studies evidence that consumers do appraise online services, including online health services, as important coping resources that they draw on to purposefully manage stressors (e.g., Liu et al., 2020; Zhao et al., 2020; Zheng & Montargot, 2021). Indeed, consumers may turn to online services when faced with physical service failure (e.g., El-Manstrly et al., 2021). Stress and resource appraisals result in consumers making trade-off decisions that also shape coping behaviors (Luce et al., 2001). Trade-offs in health may comprise treatment decisions balancing survival rate with lifestyle change or pain levels—decisions that are heavily emotion-laden. Consumers may draw on online services (e.g., health forums) as a means of coping with such emotions (Zheng & Montargot, 2021).

There is evidence that (dis)engagement coping theorizing is a relevant foundation for understanding coping in the context of complex services (Buizza et al., 2022; Simione et al., 2022). Coping needs to be understood situationally. That is, the type of enacted...
coping is dependent on the perceived nature of the stressor. For example, where a stressor cannot be changed (or there is a perceived lack of consumer control), emotion-focused (dis)engagement coping is likely to be enacted (Yi & Baumgartner, 2004). Disengagement and engagement coping are, thus, theorized to have different purposes. With respect to engagement coping, the purpose can be to both directly manage/change the stressor itself and/or adapt to the situation (Roussi et al., 2007). For example, in the context of breast cancer, Varni et al. (2012) found that consumers used engagement coping to enhance a sense of perceived control over their health situation as well as adapting to the situation using cognitive restructuring. On the other hand, the purpose of disengagement coping is to put distance between oneself and the stressor. For example, in the case of a breast cancer diagnosis, consumers may use wishful thinking to give themselves a “break” from the current situation (Varni et al., 2012). There is evidence that, in the context of complex services, engagement coping can lead to a reduction in perceived stress and positive psychological wellbeing; whereas disengagement coping can lead to heightened stress levels and psychological distress (Buizza et al., 2022; Simione et al., 2022). However, we should be cautious in making such generalizations. There is some debate over which coping efforts constitute disengagement approaches. For example, distraction coping efforts have conceptually been variously categorized as engagement and disengagement, and analytically researchers often find fuzzy factor structures between (dis)engagement scales (Fisher et al., 2021). Further, (dis)engagement coping are likely to be used in combination, which will shape the outcome depending on the situation (Lazarus, 2006; Lundqvist & Ahlström, 2006). It is, thus, important to understand the combination of disengagement and engagement coping strategies in terms of coping profiles and in the context of an increased focus on the delivery of more personalized care.

### 2.3 Coping profiles using online health services

Consistent with broader categorizations of engagement behaviors (van Doorn et al., 2010), (dis)engagement coping can be split into specific coping behaviors. Engagement coping comes in the form of, for example, problem-solving and emotional regulation, and disengagement coping comes in the form of, for example, wishful thinking and denial (Buizza et al., 2022; Simione et al., 2022). Importantly, engagement coping is often found to consist of the largest set of coping behaviors. For example, with respect to coping with health issues, identified behaviors include: active planning, information seeking, seeking social support, positive reinterpretation, acceptance, and emotional expression (e.g., Lifford et al., 2015; Roussi et al., 2007). Whereas disengagement coping is usually defined as a more constrained set. For example, in the context of health, identified behaviors include: denial, wishful thinking, or distraction (e.g., Varni et al., 2012). Lazarus and colleagues (e.g., Folkman et al., 1986) found in successive studies that five coping strategies were relatively stable across diverse situations and samples. Under engagement coping there was planful problem-solving; accepting responsibility; seeking social support; positive reappraisal. Under disengagement coping, escape/avoidance was a stable as well as a prevalent coping behavior.

Folkman et al. (1986) suggest that in higher threat situations (such as when faced with health issues) people may combine their use of engagement and disengagement strategies. That is, seemingly opposite coping strategies may be used in combination as complementary processes. For example, short-term escape/avoidance in the face of a diabetes type 1 diagnosis can help consumers deal with the immediate impact of the diagnosis, while planning for treatment, lifestyle, and dietary choices for the longer term. Thus, consumers may draw on online health services as coping resources in multiple ways, that is, coping profiles. Such coping profiles can be instrumental in determining the success or otherwise of coping efforts with respect to health outcomes (Kavčič et al., 2022), yet studies are restricted by focusing on limited coping strategies or categorizing coping strategies at too abstract a level (e.g., avoidance vs. approach categorization) and thus missing the nuances of more detailed coping profiles (Lischetzke et al., 2022). For example, to facilitate health self-management, consumers may access health product (digital) markets, seek social support with diverse groups of consumers in health forums, and seek information on possible treatments to prepare themselves for the journey ahead (Keeling et al., 2015; Liu et al., 2020). Recent evidence points to three broad coping profiles in high-threat health situations: engagement profile, disengagement profile, and a third hybrid profile (Kavčič et al., 2022). Further, such coping profiles may be fairly stable over time with consequences for maintaining health over the longer term through more personalized care services (Bailly et al., 2016). Figure 1 positions our focus on coping profiles within the overall stress and coping process.

### 2.4 Interconsumer differences in coping

Potential sources of differences in coping profiles stem from individual and situational (e.g., health status) characteristics (Kavčič et al., 2022). With respect to individual characteristics, there is evidence that gender may play a role in shaping coping profiles in response to health issues (Hammermeister & Burton, 2004; Lifford et al., 2015). For example, women may be more likely to seek social support and men more likely to use escapism. Further, age may play a role in coping profiles (cf. work on engagement, Kautish et al., 2022). Early work suggested that older age groups are more likely to cope with major illness through enacting a minimizing coping strategy (Felton & Revenson, 1987). More recent work suggests that such individual differences may be due to life expectations (e.g., with respect to health status) and access to resources (Cobler et al., 2022). Indeed, socioeconomic status (SES) may be most influential as it directly impacts on the coping resources available to consumers (Gallo & Matthews, 2003), potentially rendering them more vulnerable as resources are depleted (Fletcher-Brown, Turnbull, et al., 2021), influencing their appraisal and thus enacted coping strategies.
Situational characteristics may impact on the success or otherwise of a coping strategy. For example, positive reappraisal may be more helpful in high threat conditions (e.g., major illness) than in low threat conditions (Mattlin et al., 1990). Recent work indicates that coping with health issues may be better understood with respect to the progression of illness. That is, coping may be oriented toward pre-emptive management of health-related stressors, coping with impact experienced during an illness episode, or coping "postimpact" (Livneh, 2016). Indeed, coping with health issues can be "messy" (Greenhalgh, 2009) and the way in which consumers approach these issues develops and changes over time (Keeling et al., 2021). That is, situational characteristics (i.e., health status) may impact on both the purpose and associated forms of enacted coping behaviors as well as the success or otherwise of those coping strategies (Fletcher-Brown, Turnbull, et al., 2021; Lundqvist & Ahlström, 2006). In the next section, we describe how we addressed these issues empirically.

3 | METHODOLOGY

This project was conducted in the United Kingdom, where the majority of health services are delivered by the National Health Service (NHS), which offers its services free at the point-of-care. There are also private healthcare providers. The NHS is primarily funded via taxation and the devolved governments largely determine each country’s NHS service strategy. There is a significant investment across the devolved nations in the delivery of services through digital channels and in the development of health technologies more broadly.

3.1 | Survey development

The survey was designed as a battery of items to measure (dis)engagement coping behaviors across multiple scales to determine coping profiles. A pool of initial items was generated guided by one of the most widely used measures—the Ways of Coping Questionnaire (WCQ: Folkman et al., 1988), which has undergone several revisions including item reduction and shaping of the scales. The WCQ consists of eight scales, six of which can be assigned as engagement coping (planful problem-solving, confrontative coping, seeking social support, self-controlling, accepting responsibility, positive reappraisal) and two as disengagement coping (distancing, escape-avoidance). There is debate over the stability of some of the scales. For example, Vitaliano et al. (1985) suggested a revised 5-scale version, while Lundqvist and Ahlström (2006) confirmed the original 8-scale structure, but supported item reduction due to poor fit with their respective scales. We developed a dual rating scale to assess whether respondents had enacted the coping behaviors described by the items in each scale, and, if so, how helpful they had found that behavior.

The survey underwent six stages of development and piloting with stakeholder groups. Taking the WCQ as a starting framework, throughout this process, we sought to evolve and establish the conceptual validity of the (dis)engagement coping scales and, subsequently, the validity of scale items. Studies 1, 2, and 3 adopted a qualitative approach, where development proceeded with initial interviews with consumers (Study 1) providing insight into how online health services were perceived as coping resources in the management of health-related stressors. In tandem, an expert panel of professionals active in the healthcare field reviewed and discussed the initial draft scales (Study 2). This information informed the
definitions of the scales, the applicability of the scales to the measurement of coping using online health services, and appropriate item wording. A revised draft was piloted with a panel of patients, who provided individual feedback (Study 3), further informing the “translation” of scales into items suitably worded for this study. Studies 4 and 5 adopted a hybrid qualitative–quantitative approach where we scripted the survey in an online format and conducted a small-scale pilot with a user panel and one-to-one interviews gathered detailed feedback (Study 4). Based on this feedback, the survey was rescripted and another pilot conducted (Study 5), including feedback, via a panel of stakeholder representatives (patients, e-health researchers, charity representatives, technology experts, and medical practitioners). A final larger-scale quantitative pilot of the general public was also conducted (Study 6). This whole process explored the conceptual basis of the scales and factor structure of the items and also ensured that the most appropriate design was utilized in terms of layout, language, range of options offered, clear instructions, and general clarity.

The final battery consisted of 27 items on six scales: Active Planning (4-items); Tangible Support (6-items); Social Support (6-items); Consultation Preparation (3-items); Involvement in Decision Making (3-items); Reappraisal and Distancing (5-items). Consistent with the WCQ approach, respondents were asked to consider a current personal health issue when responding to the items. Respondents indicated whether they did/did not enact a coping behavior (“I have not tried this” or “I have tried this”). Those who had enacted a behavior were then asked to indicate how helpful they had found that behavior (seven-point Likert-type scale, anchored at 1 = very unhelpful and 7 = very helpful). We also gathered details on use of online health services by provider, consumer demographics, and current health status.

### 3.2 | Survey deployment and sampling

We report on the final Study 7, in which a general population survey was conducted via a market research company using quota sampling based on the UK general population. Respondents confirmed that they had access to online health services. The final sample consisted of 623 consumers, with 291 males (46.6%) and 332 females (53.5%), average age of 44.01 years (SD = 14.944), with a median of 2 children. The majority of the sample were married, in a civil partnership or living with a partner (425, 68.3%), and were employed (411, 65.9%). On average, respondents had achieved at least a high school level of education. In terms of health status, 247 respondents had no declared health condition, 39 had an acute condition, and 337 had a chronic condition. Ethics permissions were gained from the relevant regional health ethics boards in the United Kingdom.

### 3.3 | Analysis

Our analysis is divided into three sections.

#### 3.3.1 | Online health services as a coping resource—Coping scale identification

Based on the first six studies, we briefly present the evolution and definition of our six scales that capture the purpose of consumer coping in drawing on online health services to manage health-related stressors alongside reported use of online health services by respondents. We then use Bayesian Confirmatory Factor Analysis (BCFA) to confirm the 6-scale structure based on dichotomous data (i.e., the enactment or not of each behavior described in the scale items)\(^1\). BCFA is acknowledged as the best procedure for use with dichotomous data as it produces more stable solutions (Byrne, 2016; Lee et al., 2010). We set the model up in AMOS26 and following Arbuckle (2019) and Taylor (2019), the data was recoded as ordered-categorical, error variances set to 1 (required for identification with dichotomous variables), and latent factor variance parameters set to 1, allowing the loading coefficients for each item to be freed. There was no missing data. We used the AMOS26 default of a diffuse (noninformative) approach to the priors, where a uniform distribution for the priors is specified (from \(-3.4 \times 10^{-38}\) to \(3.4 \times 10^{38}\)). AMOS26 uses the Markov Chain Monte Carlo (MCMC) algorithm (random walk/Metropolis). Lee et al. (2010) note that ordinal level data, especially dichotomous data, with limited information require a more substantial number of iterations to converge (e.g., up to 100,000). We, thus, followed the recommended procedure for dichotomous variables and requested 25,000 burn-in observations, plus 100,000 postburn-in observations (Taylor, 2019).

The parameters for the scale items demonstrate reasonable convergence as indicated by the convergence statistic of 1.0249, being comfortably below the 1.100 thresholds (Gelman et al., 1995) and visual inspection of trace and “first and last” plots. The 6-scale model adequately represents the relationships between the scale items as indicated by visual inspection of the histograms for scale items, and the posterior predictive probability is 0.30 (>0.05 and approaching the 0.5 ideal). Autocorrelation was indicated as a possible issue on some indicators and thinning of the samples was applied as recommended to correct for autocorrelation issues (Arbuckle, 2019). Although Taylor (2019) notes that when other diagnostics are reasonable, then autocorrelation by itself is not problematic. The standardized Bayesian loading parameters and credibility intervals are presented in the results.

#### 3.3.2 | Relative mapping of scales

To enable a relative comparison of the enactment and perceived helpfulness between the coping scales, we undertook a Quadrant

\(^1\)As an additional check, using FACTOR v12.01.02, we undertook an EFA (Unweighted Least Squares) to compare the five-, six-, and seven-factor solutions based on the tetrachoric correlations (as recommended for dichotomous variables). The six-factor solution, equivalent to the BCFA structure presented here, was superior to both the five-factor solution (which produced a confused factor structure due to a high number of cross-loadings) and the seven-factor solution (where a seventh factor could not be determined due to low loadings).
Analysis (Hung et al., 2011). An "enactment index" was calculated by dividing the proportion of respondents who indicated that they enacted behaviors on each coping scale by the weighted average for all scales (applying a multiplication by 100). A score of 100 on this index is considered the average. A "perceived helpfulness index" was similarly calculated (i.e., based on a helpful−not helpful categorization). We map enactment by perceived helpfulness for the 6-scales in the results. We used logistic regression (SPSS26) to identify differences on each scale (both enactment and helpfulness) by individual characteristics (i.e., age, measured as a continuous variable, gender, marital status, qualifications, employment status, type of community, number of children) and health status (no declared condition, acute condition, chronic condition).

### 3.3.3 | Coping profiles

We developed enactment and perceived helpfulness coping profiles using cluster analysis. We applied the Two-Step Cluster procedure (SPSS26) based on the enactment dichotomous scores for the 6-scales. The Two-Step Cluster procedure allows for categorical variables to be specified, uses Log-likelihood as the distance measure, and is recommended for use with dichotomous variables (Norušis, 2011). We specified 2, 3, and 4 clusters and compared the results. K-means clustering, using simple Euclidean distance, was applied to the perceived helpfulness ratings. This type of clustering is suited to the type of scales that we used. We similarly explored the 2, 3, and 4 clusters and compared the results. We further explored the differences between cluster memberships based on health status (no condition, acute condition, chronic condition). We present the developed cluster solutions in the results.

## 4 | (Dis)Engagement Coping with Online Health Services

### 4.1 | The purpose of coping—(Dis)engagement coping scales

Among our respondents, the use of online health services is high, spread across a diversity of service providers, although services provided by the government (and related healthcare agencies) predominate (Table 1).

<table>
<thead>
<tr>
<th>Online health service provider</th>
<th>Usage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government (and related healthcare agencies)</td>
<td>527 (84.6%)</td>
</tr>
<tr>
<td>Health-related charity or professional associations</td>
<td>355 (57%)</td>
</tr>
<tr>
<td>Private, commercial organizations</td>
<td>296 (47.5%)</td>
</tr>
<tr>
<td>C2C provision (e.g., health forums)</td>
<td>209 (33.6%)</td>
</tr>
<tr>
<td>Regulator or ombudsman services</td>
<td>106 (17%)</td>
</tr>
</tbody>
</table>

Across the development and piloting studies, it was clear that online health services were perceived as important coping resources for consumers in their health management. This developmental process, shaped by insights from stakeholders, supported the translation of the original WCQ scale structure to the final six coping scale structures (capturing coping behaviors) used in this study. We map this translation in Table 2, from the conceptual WCQ foundation, through qualitative development (Studies 1, 2, and 3), quantitative–qualitative piloting (Studies 4 and 5), and quantitative pilot (Study 6) to, finally, how the purposes of coping are defined in the resultant six scales (Study 7—the main focus of this paper).

This mapping and the emergent six-scale structure help us to understand how consumers make purposeful use of online health services as coping resources across a breadth of application purposes. It was acknowledged across studies that online services had evolved beyond general informational services to become more purposeful coping resources. Importantly, in the development of these scales, the disengagement–engagement distinction was less clear. During piloting, it emerged that online health services were generally perceived (by consumers, health-related charity representatives, and healthcare professionals) as more engagement than disengagement coping resources, with coping behaviors directed at approaching the health stressor. Where online health resources were viewed as disengagement coping resources, which was in relation to linked thoughts and emotions, it was not possible to disaggregate these fully. That is, the distancing and escape-avoidance (disengagement) elements and the positive reappraisal and self-controlling (engagement) elements were combined in the hybrid Reappraisal and Distancing scale. We, thus, proceeded with the six-scale framework, which, in this final study, we evaluated using BCFA (Table 3).

We conclude that the six-factor model is a good fit with the data, and the scale items load well onto their respective scales, supported by the credibility intervals. We utilized these scales for subsequent analysis.

### 4.2 | Relative mapping of scales

Applying quadrant analysis, we mapped the six-scales relative to one another in terms of enactment and perceived helpfulness (Figure 2).

**Active Planning and Involvement in Decision Making** had (relatively) high enactment and higher perceived helpfulness ratings (Quadrant 1). **Tangible Support and Reappraisal and Distancing** had (relatively) high enactment but lower perceived helpfulness (Quadrant 2). **Consultation Preparation** had (relatively) low enactment but higher perceived helpfulness (Quadrant 3). **Social Support** had (relatively) low enactment and lower helpfulness ratings (Quadrant 4). Thus, in terms of the purpose of coping behaviors, consumers draw on online health services with the primary purpose of active management of the health-related stressor (i.e., Active Planning, Involvement in Decision Making, and Consultation Preparation).
<table>
<thead>
<tr>
<th>Disengagement categorization</th>
<th>Conceptual foundational scales (derived from WCQ)</th>
<th>Qualitative consumer and expert panel interviews and initial (definitional) pilots: Studies 1, 2, and 3</th>
<th>Qualitative-quantitativestakeholder panels (scales) pilots of online survey: Studies 4, 5, and 6</th>
<th>Finalized scales: Study 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement</td>
<td>Planful Problem-Solving (focused efforts to change the stressor)</td>
<td>Recognition of evolution beyond informational services, translated directly as opportunity for self-action as a clear advantage of online health services, including both current and future orientation</td>
<td>Active items confirmed as one scale (passive information items screened out as not sufficient to capture purpose of coping)</td>
<td>Active Planning (supporting a more active role in healthcare through devising and following action plans)</td>
</tr>
<tr>
<td>Confrontative Coping</td>
<td>Recognition of potential conflict with HCPs due to power differentials, translated to online health services offering opportunity to prepare for and potentially reduce, or manage better, such conflict</td>
<td>Reduction in items due to overlapping items, confirmed as one scale</td>
<td>Consultation Preparation (supplementing consultations with extra material and/or impact on the nature of interactions with consultations)</td>
<td></td>
</tr>
<tr>
<td>Accepting Responsibility</td>
<td>Recognition of differences in active or passive role, translated as online health services facilitating active and more informed role in decision-making with some potential for disagreement with HCP</td>
<td>Reduction in items due to overlapping items, confirmed as one scale</td>
<td>Involvement in Decision Making (understanding decisions that have been made about health and/or supporting own decision making activity)</td>
<td></td>
</tr>
<tr>
<td>Seeking Social Support</td>
<td>Recognition of vitality of social support, translated to two/multiway nature of both receiving and giving (emotional and guidance) support, including ability to share (experiences) and reduce loneliness, informal online support services also noted as valuable</td>
<td>Reduction in items required due to overlapping items, confirmed as one scale, and distinct from tangible support scale</td>
<td>Social Support (finding support from others with similar experiences and/or providing support to others)</td>
<td></td>
</tr>
</tbody>
</table>

Relationship to active planning noted and opening up of access to tangible support offered by online services, translated to tangible support offered through online health services as separate to other types of support, especially as being very practical

Confirmed as one scale and distinct from active planning and social support scales

Tangible Support (sourcing suppliers of health-related service provision, including drugs, equipment and health courses)
There is less focus on the two “support” scales (i.e., Tangible Support, and Social Support) and the Reappraisal and Distancing scale. Relatedly, we note that these latter three scales, were also ranked as relatively less helpful than the scales related to active health management.

We did not find evidence for any systematic influences of individual differences on the use and perceived helpfulness of the scales. However, we find evidence of systematic differences relating to health status on enactment (four scales) but not perceived helpfulness (Table 4).

We find that those with a chronic condition are more likely to enact Consultation Preparation, Social Support, Involvement in Decision Making, and Reappraisal and Distancing than the reference “no condition” group. We did not evidence this for those with an acute condition.

### 4.3 Consumer coping profiles

#### 4.3.1 Enactment coping profiles

We assessed a 2 cluster solution (allowing a simple enactment/non-enactment distinction), 3 cluster solution (based on previous literature), and 4 cluster solution (to assess additionality). The 3 cluster solution (average silhouette 0.9, Table 5) was superior to the 2 cluster solution in that it additionally identified a cluster that enacted a very limited set of coping behaviors. The 3 cluster solution also indicates an important distinction in preference for (or not) use of online health services as social or tangible support coping resources. The 3 cluster solution was also superior to the 4 factor as this contributed little additional information to the 3 cluster solution.

The clusters evidence high use of online health services as coping resources with the majority of participants in Cluster 1. However, importantly, there was also a significant association between cluster membership and health status: ($\chi^2 = 30.514, df = 4, p < 0.0000$). While all groups were represented in each cluster, the dominant group in Cluster 1 was those with chronic conditions (59.1% of cluster membership), whereas the dominant group in Cluster 3 was those with no declared condition (66.2% of cluster membership). We, thus, moved onto the next phase of clustering with the following three base clusters (Table 5):

- Cluster 1—comprehensive impact coping profile, that is, those coping with a current health issue drawing on online health services for multiple purposes.
- Cluster 2—focused impact coping profile, that is, those who may have a current health issue who utilize the active management behaviors only, but do not draw on support.
- Cluster 3—pre-emptive coping profile, that is, those who may not have a current health issue, but nevertheless utilize online health services in a limited way (through active planning) to prevent health issues.
4.3.2 | Perceived helpfulness coping profiles

We similarly evaluated the 2, 3, and 4 cluster solutions with respect to the perceived helpfulness of the coping scales. The 3 cluster solution was again superior to the 2- and 4-factor solutions. Table 6 presents the cluster centers (seven represents very helpful and one represents very unhelpful).

Cluster 1 represents a low helpfulness rating on all scales other than Active Planning. Cluster 2 represents a positive helpfulness rating across all scales. Cluster 3 represents positive helpfulness.

### Table 3 Bayesian loading parameters and credibility intervals (ppp = 0.3)

<table>
<thead>
<tr>
<th>Scale and item</th>
<th>β</th>
<th>Credible interval (95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tangible support</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buy alternative (nonconventional) treatments, drugs, equipment or similar</td>
<td>0.832 (0.030)</td>
<td>0.769–0.886</td>
</tr>
<tr>
<td>Locate a health service provider and/or hospital</td>
<td>0.858 (0.027)</td>
<td>0.802–0.907</td>
</tr>
<tr>
<td>Buy conventional treatments, drugs, equipment, or similar</td>
<td>0.892 (0.019)</td>
<td>0.851–0.926</td>
</tr>
<tr>
<td>Find out about or buy health insurance</td>
<td>0.880 (0.023)</td>
<td>0.831–0.921</td>
</tr>
<tr>
<td>Follow a health/illness-related course</td>
<td>0.874 (0.022)</td>
<td>0.825–0.913</td>
</tr>
<tr>
<td>Find care support service providers (in home or residential)</td>
<td>0.916 (0.014)</td>
<td>0.888–0.941</td>
</tr>
<tr>
<td><strong>Active planning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Be more active in your own healthcare</td>
<td>0.918 (0.018)</td>
<td>0.880–0.952</td>
</tr>
<tr>
<td>Figure out how best to take care of your health</td>
<td>0.935 (0.016)</td>
<td>0.897–0.958</td>
</tr>
<tr>
<td>Follow a treatment plan or course better</td>
<td>0.928 (0.016)</td>
<td>0.894–0.952</td>
</tr>
<tr>
<td>Prepare for what lies ahead in health/illness—know what to expect</td>
<td>0.975 (0.006)</td>
<td>0.962–0.983</td>
</tr>
<tr>
<td><strong>Social support</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hear views, experiences, and advice on health/illness from someone other than a healthcare professional</td>
<td>0.924 (0.017)</td>
<td>0.882–0.951</td>
</tr>
<tr>
<td>Provide emotional support to others in their health/illness situation</td>
<td>0.961 (0.015)</td>
<td>0.931–0.983</td>
</tr>
<tr>
<td>Escape from loneliness</td>
<td>0.916 (0.017)</td>
<td>0.881–0.947</td>
</tr>
<tr>
<td>Share medical information that may be of use to others</td>
<td>0.960 (0.009)</td>
<td>0.940–0.975</td>
</tr>
<tr>
<td>Access health/illness support groups that are not available to you elsewhere</td>
<td>0.956 (0.009)</td>
<td>0.937–0.970</td>
</tr>
<tr>
<td>Pass on/discuss health information with family and friends</td>
<td>0.881 (0.020)</td>
<td>0.838–0.918</td>
</tr>
<tr>
<td><strong>Consultation preparation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get the best from a consultation by knowing what questions to ask</td>
<td>0.868 (0.044)</td>
<td>0.735–0.892</td>
</tr>
<tr>
<td>Understand what to do when given conflicting advice from healthcare professionals</td>
<td>0.814 (0.050)</td>
<td>0.707–0.926</td>
</tr>
<tr>
<td>Feel you were more on an even footing with healthcare professionals</td>
<td>0.824 (0.060)</td>
<td>0.700–0.940</td>
</tr>
<tr>
<td><strong>Involvement in decision making</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make an informed choice about how to look after your health</td>
<td>0.952 (0.025)</td>
<td>0.888–0.981</td>
</tr>
<tr>
<td>Challenge a decision made about your health/illness by a healthcare professional</td>
<td>0.962 (0.014)</td>
<td>0.929–0.981</td>
</tr>
<tr>
<td>Request a specific treatment or medication from a healthcare professional</td>
<td>0.973 (0.008)</td>
<td>0.954–0.986</td>
</tr>
<tr>
<td><strong>Reappraisal and distancing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Give you a sense of purpose and control—a feeling that there was something that you could do about your health/illness</td>
<td>0.948 (0.022)</td>
<td>0.898–0.976</td>
</tr>
<tr>
<td>Rethink your health/illness in a different light</td>
<td>0.975 (0.006)</td>
<td>0.962–0.984</td>
</tr>
<tr>
<td>Allow you to change or grow as a person</td>
<td>0.956 (0.015)</td>
<td>0.920–0.976</td>
</tr>
<tr>
<td>Take you to another world and get your mind off your health/illness</td>
<td>0.974 (0.007)</td>
<td>0.960–0.985</td>
</tr>
<tr>
<td>Think about your health/illness in a more detached way</td>
<td>0.968 (0.009)</td>
<td>0.949–0.981</td>
</tr>
</tbody>
</table>

Abbreviation: ppp, posterior predictive probability.
**FIGURE 2** Quadrant analysis of the six coping scales

**TABLE 4** Systematic differences on the enactment of coping scales (logistic regression)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Health status</th>
<th>Parameters</th>
<th>Odds ratios (95% CIs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultation preparation</td>
<td>Overall (ref group no condition)</td>
<td>Wald = 16.467, df = 2, $p = 0.000$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>$B = 0.152, SE = 0.564, p = 0.788$</td>
<td>$1.164 (0.386–3.513)$</td>
</tr>
<tr>
<td></td>
<td>Chronic</td>
<td>$B = 1.579, SE = 0.391, p = 0.000$</td>
<td>$4.848 (2.251–10.442)$</td>
</tr>
<tr>
<td>Social support</td>
<td>Overall (ref group no condition)</td>
<td>Wald = 17.396, df = 2, $p = 0.000$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>$B = 0.045, SE = 0.448, p = 0.920$</td>
<td>$1.046 (0.435–2.518)$</td>
</tr>
<tr>
<td></td>
<td>Chronic</td>
<td>$B = 1.093, SE = 0.268, p = 0.000$</td>
<td>$2.985 (1.767–5.042)$</td>
</tr>
<tr>
<td>Involvement in decision making</td>
<td>Overall (ref group no condition)</td>
<td>Wald = 10.826, df = 2, $p = 0.004$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>$B = 0.209, SE = 0.640, p = 0.744$</td>
<td>$1.232 (0.352–4.316)$</td>
</tr>
<tr>
<td></td>
<td>Chronic</td>
<td>$B = 1.320, SE = 0.403, p = 0.001$</td>
<td>$3.742 (1.700–8.238)$</td>
</tr>
<tr>
<td>Reappraisal and distancing</td>
<td>Overall (ref group no condition)</td>
<td>Wald = 8.724, df = 2, $p = 0.013$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acute</td>
<td>$B = 1.208, SE = 1.040, p = 0.245$</td>
<td>$3.348 (0.436–25.685)$</td>
</tr>
<tr>
<td></td>
<td>Chronic</td>
<td>$B = 1.167, SE = 0.411, p = 0.004$</td>
<td>$3.211 (1.436–7.180)$</td>
</tr>
</tbody>
</table>

**TABLE 5** Two-Step Cluster 3 factor solution for enactment, cluster modes

<table>
<thead>
<tr>
<th>Cluster n (%)</th>
<th>Scale and cluster mode (where 1 = enactment)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AP</td>
</tr>
<tr>
<td>Cluster 1, $n = 501$ (80.4%)</td>
<td>1</td>
</tr>
<tr>
<td>Cluster 2, $n = 54$ (8.7%)</td>
<td>1</td>
</tr>
<tr>
<td>Cluster 3, $n = 68$ (10.9%)</td>
<td>1</td>
</tr>
</tbody>
</table>

Abbreviations: AP, active planning; CP, consultation preparation; IiDM, involvement in decision making; R&D, reappraisal and distancing; SS, social support; TS, tangible support.
ratings on all scales other than the two support scales. As with the enactment clusters, we similarly found a significant association between cluster membership and health status ($\chi^2 = 14.094$, $df = 4$, $p = 0.007$). All groups were represented in each cluster, but those with no declared condition were dominant in Cluster 1 (56% of cluster membership), while those with a chronic condition were dominant in Clusters 2 and 3 (56.9% and 55.5% of cluster membership, respectively).

Both of the three cluster solutions closely align and we examined the relationship between them. While there was a significant association between the two solutions ($\chi^2 = 307.937$, $df = 4$, $p < 0.000$), there was not a complete alignment (Table 7).

Integrating the three cluster solutions for enactment and helpfulness, with identified differences in cluster membership based on health status, we identify the following three coping profiles:

- **Comprehensive impact coping profile**—largely adopted by those who are currently coping with a current health issue and who draw on online health services for multiple purposes, yet find support scales less helpful.
- **Focused impact coping profile**—largely adopted by those who may have a current health issue, who view online health services as helpful coping resources, but nevertheless utilize the active management behaviors only, and do not tend to draw on services for social or tangible support.
- **Pre-emptive coping profile**—largely adopted by those who do not have a current health issue, who utilize online health services in a limited way (through active planning) to prevent health issues, and do not view other online health services as serving other helpful purposes for coping.

### 5 | DISCUSSION

We set out to understand how consumers draw on online health services as coping resources. Heavy investment in the provision of online health services by a diverse range of formal (e.g., NHS provision or commercial offerings) and informal service providers (e.g., consumer-to-consumer support services) has resulted in a wealth of potential coping resources for consumers dealing with health-related stressors (Keeling et al., 2015). We contribute to developing a much-needed structured understanding of consumer coping (Lischetzke et al., 2022; Zhao et al., 2020) by applying a core psychological lens, that is, (dis)engagement coping theory, to our understanding of how current online health service provision is utilized by consumers in terms of six purposes of coping and the way in which they combine different coping behaviors in three coping profiles.

#### 5.1 | Theoretical implications

It is clear from our study that consumers comprehensively draw on online health services as coping resources. We offer a conceptual structure and empirically developed inventory of how consumers use these online health services in terms of (dis)engagement coping behaviors and perceived helpfulness. This enables us to capture the purpose of consumer coping in six scales. During the extensive development phase, it was clear that there was a consensus of opinion among consumers and professionals that engagement coping was the main purpose of consumer coping with respect to online health services as a coping resource. This was captured in our battery of items. In our main study, consumer coping efforts were largely directed toward direct active management of the health stressor, through active planning, involvement in decision making, and consultation preparation. To a lesser extent, consumers also drew on tangible support services, for example, to source health equipment, alongside drawing on and providing social support with/to other consumers. Contributing to the wider discourse on consumer value from complex services, these efforts toward engagement coping reflect a purposeful drive from consumers toward enhancing the “efficiency” and “effectiveness” of their health management (Keeling et al., 2021). Further, coping efforts relating to active planning, involvement in decision making, and consultation preparation were viewed as relatively more helpful than other coping efforts. This adds weight to the integral link between online and offline service provision (e.g., El-Manstrly et al., 2021), where consumers draw on online health services as a coping mechanism to not only boost their own ability to self-manage but also in dealing with formal physical service provision (e.g., consultations). Furthermore, during the development stages, it was not possible to delineate disengagement and engagement coping purposes as others have done (e.g., Carver & Connor-Smith, 2010). Indeed, there is debate over how coping with health-related emotions should be positioned in terms of (dis)engagement (Fisher et al., 2021). Contributing to this
develops and changes over time (Keeling et al., 2021). In particular, it is clear from evidence that the way in which consumers approach health issues varies and that these approaches can be leveraged to support health outcomes. Identification of these profiles also contributes to growing understanding of the potential for coping across the progression of conditions (Livneh, 2016), and also bring a structured understanding to the “messiness” of managing health-related stress (Greenhalgh, 2009).

Indeed, contrary to others (e.g., Cobler et al., 2022; Lifford et al., 2015), we did not find systematic differences in the purpose of coping across consumer demographics. However, we did find systematic differences with respect to situational characteristics, as others have proposed (Kavčič et al., 2022), that is, health status. We evidence that those who do not have a health condition may nevertheless adopt a pre-emptive and limited coping profile, wherein active planning is used to prevent health issues. Where consumers are coping with a current health issue, they are more likely to adopt one of the two profiles. A comprehensive profile to cope with the impact of that condition (usually a chronic condition) where coping is directed toward active management of the health stressor and related emotions. Tangible and social support are enacted but may be perceived as less helpful. A focused impact profile is where coping concentrates on active management of the stressor and related emotions only, and coping efforts are generally regarded as helpful. In the latter two profiles, emotions are managed through a combination of (dis)engagement coping. Identification of these profiles also contributes to growing evidence that the way in which consumers approach health issues develops and changes over time (Keeling et al., 2021). In particular, it may be important to focus not just on coping behaviors but the way in which they are (differentially) perceived as helpful or not as a condition progresses.

5.2 | Practical implications

Globally, healthcare services are under heavy burden, whether from demographic shifts that increase demands on services, reduced availability of qualified healthcare professionals, financial and technological constraints, or wider societal conditions that impact delivery (Rigby et al., 2011; Stephanie & Sharma, 2021). Policymakers and practitioners alike are pushing digital healthcare services provision as a core solution to overcoming these burdens (Cinaroglu & Baser, 2018; Keeling et al., 2019). For example, facilitating health self-management, increasing access to a multitude of health product (digital) markets and connecting diverse groups of consumers in health forums (Keeling et al., 2015; Liu et al., 2020). At the same time, digital services can innovate service delivery (Cinaroglu & Baser, 2018), and offer a cost-effective enhanced breadth and quality of service provision (Wirtz & Zeithaml, 2018).

In this context, the implications of our study confirm that online health services are a valuable coping resource that can contribute positively to the engagement coping profiles of consumers. Our study provides a structure to understand the purpose of consumer coping (as captured in the six coping scales), and our inventory can be utilized by service providers to assess the coping efforts of their specific consumer bases. This structured understanding can be strategically utilized by practitioners in determining the nature and provision of, alongside communications about, online health services as well as targeted interventions. While there is an appetite among consumers for the use of online health services as coping resources, the coping profiles point to important differences with respect to pre-emptive limited coping strategies versus management of the impact of a health condition through comprehensive or focused coping strategies. Of particular note is that community-based interventions often promote coping strategies based on social support, yet there is mixed evidence as to their success (Nickel & von dem Knesebeck, 2020). Our profiles point to the potential reluctance to draw on such resources in an online context and, more importantly, to also both ensure that such resources adequately meet consumer coping purposes for such resources (i.e., in terms of managing the impact of health issues) as well as to better inform consumers how to get the most out of such resources (especially given inequalities in access and understanding, and the variability in the provision and quality of such resources).

On a wider note, our identified coping profiles provide insights to policymakers in terms of the strategic direction of future service provision, especially in an online context in a postpandemic world. In particular, our identified profiles point to implications for understanding consumer health journeys and the potential to widen the provision of individual patient-centered health service delivery. Recently, three categories of digital health have been offered that capture the formal consumer-service-provider relationship: telehealth or direct care delivery, digital access tools, and digital monitoring (D’Anza & Pronovost, 2022). To this, we add that there is clearly a lot of scope to continue to develop online health services that can purposefully support consumers in their engagement coping efforts toward self-managing health-related stressors, which can complement formal consumer–provider relationships. Perhaps of most importance is that our profiles indicate that coping efforts may change as a consumer’s health status changes and progresses. Those without a health issue do still draw on online health services in a pre-emptive fashion (following Livneh, 2016), supporting efforts to facilitate consumers’ (self-)prevention of health issues. While those with more advanced conditions can heavily draw on online health services as coping resources, supporting efforts to engage consumers more deeply in their care and treatment plans with online resources such as consultation readiness checklists. Given that, postpandemic, the burden on health services is likely to persist for some time to
come (Simione et al., 2022), understanding the complexity of consumer self-management coping efforts (i.e., as structured by our six scales) using online services can, thus, provide a useful basis for future strategic planning to smooth consumers navigation of services, alongside service development that meet needs and is sustainable and not a “stopgap” in provision (D’Anza & Pronovost, 2022).

However, we must be mindful of not introducing inequalities in the way in which we support consumers in their coping efforts through a focus on online health service provision (Keeling et al., 2019). Undoubtedly, the equitable management of health at global, national, societal, and individual levels is both daunting and challenging to achieve. Significant efforts to address health-related inequalities have resulted in advances in, for example, extending life expectancy globally. Yet, inequalities in health and healthcare persist, which have been brought into sharp focus by the Covid-19 pandemic (United Nations, 2021). A particular area of concern is affordable, accessible healthcare services, where even in middle to high-income countries inequalities persist, particularly due to digital and knowledge divides. Online health services are often heralded as a panacea in the delivery of affordable and accessible health services. Our evidence supports that consumers are keen to be active partners in this approach. However, there is also evidence that consumers may not always have the access, capacity, or capability to fully engage with such services (Keeling et al., 2019). Providers and policymakers should infuse their strategic planning with not only an understanding of the changing coping efforts of consumers but also their means for being able to utilize online services as coping resources. Furthermore and relatedly, understanding of coping efforts can inform training programs to facilitate the development of more effective coping strategies for specific situations (Lazarus, 2006). There is, therefore, an opportunity to tackle potential inequalities with respect to capability through the development of focused consumer training, which might best be delivered in the community. At the same time, equipping healthcare professionals in the field with online resources accessed through mobile technology can be a game-changer in the delivery of care in remote locations (Fletcher-Brown, Carter, et al., 2021). Supported by adequate professional training, such mobile strategies embedded within service delivery may be useful in boosting consumer coping efforts in collaboration with healthcare professionals to tackle digital and health inequalities.

5.3 | Future research

We examine consumer coping efforts cross-sectionally to determine interconsumer differences. However, while our evidence supports the need to understand coping efforts over the progression of a condition, we cannot evidence intraconsumer differences over time. Folkman et al. (1986) argue that a complete understanding of coping needs to combine both of these elements. For example, intra-individual studies show the importance of stress in relation to how the person changes on a day-to-day basis. Adopting a life-course paradigm (Moschis, 2021), longitudinal studies that track health status and coping efforts over time would be valuable in understanding the changes in (dis)engagement coping efforts alongside changes in perceived helpfulness of such coping efforts. However, longitudinal studies should also document the impact of personal dispositions (e.g., personality types) as they may impact on coping efforts (Duhachek & Iacobucci, 2005; Hollebeek et al., 2022; Selzer et al., 2021; Sinha & Lu, 2022), including in an online context (Blazevic et al., 2014). A useful direction may be in the development of consumer personas with respect to (dis)engagement coping that combine personality or other dispositions with the coping profiles that we identify. Such studies could also consider the scope of (dis)engagement coping efforts in relation to specific conditions. Our profiles indicate a trend toward engagement coping in relation to health-related stressors, but further research, focused on specific conditions may identify different (dis)engagement coping preferences. Further, future research should also identify and distinguish between short-term versus long-term outcomes of different coping profiles, for example, with respect to psychological health or social isolation. This is important as short-term gains (e.g., focusing on active management of specific symptoms or treatments) may not always lead to long-term value (e.g., in terms of patient satisfaction or supportive social networks) (Folkman et al., 1986; Keeling et al., 2021).

Future research could also develop our understanding of the social nature of coping and its impact on the success or otherwise of coping with health-related stress. For example, when consumers share a stressor with their family, the resultant distress and coping efforts are similarly linked (Keeling et al., 1996). That is, the coping efforts of consumers and their carers can interact and impact on the successful outcome or otherwise of those coping efforts (Hodgson et al., 2021). Similarly, stigmatization plays an important role in influencing sustained coping efforts. For example, stigmatization can lead to a mismatch between the intended engagement purpose of consumer coping efforts and the way in which they are perceived by others as disengagement coping. Where there is a mismatch, this can be detrimental in terms of resilience and sustained coping efforts, as well as creating additional emotional stress (Rodhain & Gourmelen, 2018). Further, others have identified “darker” sides of physical disengagement coping, for example, in the form of substance abuse (Fisher et al., 2021). Exploring the potential for online resources to support such as disengagement coping approaches (e.g., access to drugs on the Dark Web, Thomaz et al., 2020) could provide substantive insights to practitioners attempting to guide and support consumers. The social nature of sharing, stigmatization, and potentially darker sides of coping provide further fuel for the debate on defining certain coping efforts (e.g., distancing) as engagement or disengagement (e.g., Fisher et al., 2021). Hence future research, together with a longitudinal approach, can identify how wider networks impact on coping efforts, appropriateness in defining (dis)engagement coping efforts, and the implications of those impacts for service provision.
DATA AVAILABILITY STATEMENT
The data that support the findings of this study are not publicly available due to ethical restrictions.

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