Interacting with Computers, 2026, 38, 671–696
https://doi.org/10.1093/iwc/iwag002
Published: 4 March 2026
Article

OXFORD

Revealing privacy needs during life's significant transitions

Ryan Colin Gibson[1,*], Karen Renaud[1], Wendy Moncur[1], Irina Cojuharenco[2], Zhou Hu[3], Diane Morrow[4], Lorraine Wright[5], Nick Hulbert-Williams[5]

[1]Department of Computer and Information Sciences, University of Strathclyde, Glasgow, United Kingdom
[2]Surrey Business School, University of Surrey, Guildford, United Kingdom
[3]School of Psychology, University of Surrey, Guildford, United Kingdom
[4]Department of Sociological and Psychological Sciences, Abertay University, Dundee, United Kingdom
[5]Department of Psychology, Edge Hill University, Ormskirk, United Kingdom

*Corresponding author: Department of Computer and Information Sciences, Livingstone Tower, 26 Richmond St, Glasgow, G1 1XH, United Kingdom. Email: ryan.gibson@strath.ac.uk

Abstract

People experience transitional events during their lives that are significant, disruptive, and potentially challenging to navigate. Emotions usually run high, and the central actor may seek personalized support from "others" who are often identified online. An increased online presence, however, can also exacerbate vulnerabilities, making it challenging for individuals to preserve their privacy. Privacy-Enhancing Technologies (PETs) can support people undergoing transitions to have more control over their online identity and related disclosures. Nevertheless, available tools of this kind do not explicitly cater to the needs of such populations, leading to low uptake. To inform the future development of bespoke PETs, we carried out a survey to understand the population characteristics and online behaviors of four transition groups: (1) leaving the Armed Forces; (2) Relationship Breakdown (Romantic); (3) Serious Illness (Cancer); and (4) LGBTQ+ ("coming out" or gender transition). Our findings suggest that bespoke PETs should engender resilience and a sense of control over what is shared online via the identification, creation, and maintenance of "safe spaces" in which network members are restricted to trusted others who are deemed supportive of the actor's transition.

RESEARCH HIGHLIGHTS

- This paper explores factors that influence the navigation of life transitions online across four different populations: 'coming out' as LGBTQ+; leaving the Armed Forces; living with cancer; and romantic relationship breakdown.
- Informed by Self-Determination theory, we highlight that Resilience and a perceived sense of control had a fundamental influence on psychological need satisfaction regardless of the transition being experienced.
- Sense of control over the transition (i.e. Autonomy) was increased by limiting disclosure and social interaction to 'safe spaces' online comprised of networks deemed supportive of the transition. The structure of these spaces, and the depth of disclosure within, is dependent on the goals of the transitioner and the overall sensitivity of the transition information.
- Safe spaces online also increased Competence and Relatedness by facilitating access to informational and emotional support (especially from peers with similar experiences), while restricting disclosure to intended audiences only.
- In summary, Privacy-Enhancing Technologies for people undergoing life transitions should engender resilience and a sense of control over what is shared online via the identification, creation, and maintenance of 'safe spaces' in which network members are restricted to trusted others who are deemed supportive of the central actor's transition.

Keywords social aspects of security and privacy, empirical studies in collaborative and social computing, life transitions, resilience, privacy-enhancing tools, self-determination theory

Significant life transitions are momentous and disruptive, requiring psychological adaptation (Campos, 2022) to overcome fundamental changes to an individual's personal identity and their relationships. This process can potentially exacerbate the risk of both physical and psychological illness—see Hulbert-Williams and Hastings (2008) for a critical discussion. Given the prevalence of life transitions (Haimson *et al.*, 2016; Holmes and Rahe, 1967) and their possible accumulative nature, it is common for people to seek support from others.

The transitioner should be able to control whom they share information with, both on- and offline—essentially preserving their

Received: January 31, 2025. **Revised:** October 6, 2025. **Accepted:** December 6, 2025
© The Author(s) 2026. Published by Oxford University Press on behalf of The British Computer Society.
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted reuse, distribution, and reproduction in any medium, provided the original work is properly cited.

privacy. Privacy is a nebulous and challenging concept to define (Solove, 2002). However, Moore (2008) suggests an elegant definition that is well suited to our context: "A right to privacy is a right to control access to and uses of—places, bodies, and personal information" (p. 421).

Information sharing is likely to evolve as the transition progresses, thus necessitating repeated considerations and efforts to control audiences. Online, this can require complex adjustments to privacy settings. For example, a person whose relationship is ending may need to review their ex-partner's access to shared online accounts (social media and other publicly visible online services), to preserve privacy and prevent potentially vengeful reactions (Herron *et al.*, 2017). The need to engage in an intricate ongoing privacy calculus across a comprehensive catalog of online accounts, and diverse interfaces can therefore constitute a tremendous burden (Nicol *et al.*, 2022). Privacy-Enhancing Technologies (PETs), defined as "a coherent system of ICT [information and communications technology] measures that protects privacy by eliminating or reducing personal data or by preventing unnecessary and/or undesired processing of personal data, all without losing the functionality of the information system" (Van Blarkom *et al.*, 2003, p. 3), can give users more control over the visibility of their information. However, uptake is generally low (Van Schaik & Renaud, 2024), and existing tools of this type are not currently developed with the needs of transitioners in mind.

Designing bespoke PETs is not an easy task because our understanding of the privacy needs and practices of transitioners is limited, with previous research scrutinizing only a select few transitions in isolation (Benlahcene *et al.*, 2021; Gibson *et al.*, 2025; Gillison *et al.*, 2008; Greene *et al.*, 2019; Huyghebaert-Zouaghi *et al.*, 2022; Stenling *et al.*, 2021; Zhang *et al.*, 2018). In this paper, we take a different approach, exploring factors that influence the navigation of transitions online across four different populations (see Table 1 for details). We show that these four populations share a common goal of constructing "safe spaces" online composed of network members deemed to be supportive of the life transition. Nevertheless, the nature of these spaces differed based on the sensitivity of the transition and the informational and emotional support goals of the central actor. Our contributions will therefore inform the future development of transition-agnostic PETs that facilitate and ease privacy preservation irrespective of the nature of the life change being experienced. This is particularly important given that life transitions often occur in tandem (Zhang *et al.*, 2018). For example, careers such as serving in the Armed Forces are described by Hinderaker (2015) as "totalistic" where values, practices, rituals, and relationships have an extended reach into a member's life, as compared to traditional employment or volunteer memberships. Consequently, a change in job status can also catalyze other life transitions, such as moving home or breakdowns in relationships.

As stated, Table 1 outlines key relevant features of the four transition populations selected for our study: (1) "Armed Forces" (Leaving); (2) "Relationship Breakdown" (Romantic); (3) "Serious Illness" (Cancer); and (4) "LGBTQ+" ("coming out" or gender transition). We coselected these specific populations during an exploratory workshop involving people with lived experience of life transitions, related third-sector organizations, policymakers, and technology companies. They were judged to offer balance on the depth of commonalities that can be uncovered *across* transitions with differing compositions, in relation to the data-gathering efforts needed to identify their online disclosure and privacy behaviors.

The second section reviews related research. In *Methods* section, we outline our research questions and the mixed-methods survey used to capture the online experiences of the four target populations. Sections *Results—quantitative analysis* and *Results—qualitative analysis (RQ4)* reports on the results and the quantitative and qualitative analysis. *Discussion* section discusses them in the context of the wider literature and the identified research questions. *Conclusion* summaries our main contributions, which are listed below:

(1) a delineation of the *characteristics, online experiences*, and *specific privacy challenges* faced by people going through four different kinds of transitions;
(2) people navigate transitions with greater satisfaction of needs when they are *resilient*;
(3) people navigate transitions with greater satisfaction of needs when they have a *sense of control*;
(4) relationship breakdown is the most taxing of the studied transitions, in terms of psychological need satisfaction related to online privacy management.
(5) regardless of the nature of the life change, PETs should support transitioners in identifying, creating, and maintaining safe spaces online that limit disclosures to people deemed supportive of transition.

Related research

Below, we review the research literature on online privacy (*Online privacy* section) and PETs (*Privacy enhancing technologies (PETs)* section). We then outline psychological need satisfaction/frustration as a lens to examine the experiences of those who undergo our selected life transitions (*Theory: psychological need satisfaction* section).

Online privacy

To demonstrate the need for privacy management during life transitions, we first examine the information people actively share with online networks, what they implicitly reveal (Zhao *et al.*, 2008), what this information conveys, and the associated potential risks and harms of such sharing (Armstrong *et al.*, 2023). We then consider the challenges of managing privacy online by expanding our conceptual understanding of privacy beyond "Informational Privacy" to accommodate further paradigms proposed by Altman (1975) and Burgoon and Aho (1982)—see Figure 1.

Personal data, i.e., "digital data that is descriptive of an individual" (Parkinson *et al.*, 2018, p. 553), is shared across a range of social media channels, deliberately posted by individuals or by significant others. People tend to create an online image of themselves by posting text, images, and videos on Social Network Sites (SNS) (Krasnova *et al.*, 2010; Xia *et al.*, 2013). Additional personal data comes from others. Online identities are coconstructed, augmented by the material that members of an individual's social networks share about them (Brandtzæg *et al.*, 2010), and by a wide range of other sources—e.g., news reports, corporate website profiles, court documents—that can reveal personal details such as date of birth, directorships, and contact addresses (Parkinson *et al.*, 2018). Personal data can readily become visible via multiple heterogenous *networked publics* (where individuals and groups coalesce online around subjects of interest and participate actively) that the data subject engages with, affording

Table 1 Features of transition types.

Armed Forces (leaving)	Relationship Breakdown (Romantic)[a]	Serious Illness (Cancer)[b] (Giusti *et al.*, 2020)	LGBTQ+ (coming out or gender transition)
Prevalence in the U.K.			
Almost 1 in 25 (over 1.85 million) people aged 16 and over are veterans of the U.K. Armed Forces (Constituency data: U.K. Armed Forces veterans, 2021 census[c]).	42% of same- and opposite-sex marriages end in divorce. Statistics monitoring the breakdown of nonformalized relationships are lacking (England and Wales, Office for National Statistics, 2021b).	3 million are currently living with cancer, with 391,000 diagnosed in 2019 alone (Macmillan Cancer Support, 2022).	Around 1.5 million people (3.2%) identified with a LGBTQ+ orientation in 2022 (U.K. census data[d]).
General practices online			
Ex-service members attempt to reproduce military social structures through collectivist online activities (Semaan *et al.*, 2016), building resilience via use of multiplayer mission-style games that employ familiar language and allow them to share experiences (Semaan *et al.*, 2016).	During a romantic relationship, an individual's online identity becomes entangled with their partner's via the generation of digital artifacts, accounts, and social networks spread across a range of devices, platforms, and applications (Dimond *et al.*, 2011; Sas & Whittaker, 2013; Freed *et al.*, 2017, 2018, 2019).	Various platforms may be used to share sensitive information with a restricted, named audience. The wider network of publics may deliberately be given incorrect or no health information to preserve privacy—particularly if health deteriorates (Moncur *et al.*, 2014).	Anonymous spaces empower those facing identity-related challenges to engage in active exploration and seek emotional/experiential support at a lower risk of exposure and harm (Devito *et al.*, 2018; Duguay, 2014; Fox & Ralston, 2016; Haimson *et al.*, 2015a; Scheuerman *et al.*, 2018).
Privacy motivations, barriers, and needs			
Ex-service members rely on peers for support (Semaan *et al.*, 2016; Wilson *et al.*, 2021). There is a culture of mental health stigma (Dosono *et al.*, 2017; Wilson *et al.*, 2021; Rossetto & Owlett, 2022), making anonymous spaces attractive (Dosono *et al.*, 2017). Family members' online activities can reflect on the service leaver (Rossetto & Owlett, 2022), meaning privacy is not the sole responsibility of the ex-service member.	Disentanglement of online identities with some links maintained to facilitate logistics of offspring's activities (Odom *et al.*, 2010; Moncur *et al.*, 2016). In cases of domestic abuse, all links are severed (Matthews *et al.*, 2017). Long-term behaviors focus on continuous monitoring of online interactions (Matthews *et al.*, 2017).	Close supporters act as information intermediaries due to the physical and emotional toll of illness (Moncur *et al.*, 2014; Ngwenya *et al.*, 2016). Individual privacy morphs into shared mutual privacy. Some might maintain second profiles on sites such as Instagram and Tumblr to communicate selectively (Isika *et al.*, 2020).	Context collapse can occur with unintended overlaps in information shared across different publics (Duguay, 2014; Haimson *et al.*, 2016; Vitak & Kim, 2014). Compartmentalization of publics with differing knowledge is needed via the use of privacy settings to partition networks on accounts (Haimson *et al.*, 2016) depending on anticipated reactions to the transition (Duguay, 2014; Haimson *et al.*, 2015b).
Privacy risks and harms			
Information leaks can harm the ex-service member's reputation and be detrimental in the search for job opportunities (Rossetto & Owlett, 2022).	Ex-partners experience emotional and physical strain when tailoring their digital profiles and social networks to become truly independent (Herron *et al.*, 2017). They choose appropriate audiences to interact with (Marshall, 2012). The depth of initial digital entanglement complicates the separation process (Herron *et al.*, 2017),	Loose privacy settings could trigger harassment (Naslund & Aschbrenner, 2019; Isika *et al.*, 2020). Sometimes, intended audience fails to respond with the empathy and support (Moncur *et al.*, 2014). Ongoing threat to employment opportunities (Naslund & Aschbrenner, 2019).	Loose privacy practices can set back the LGBTQ+ transition, which may become precipitately visible to close personal contacts (Carrasco and Kerne, 2018; Lerner *et al.*, 2020) and facilitate trolling behaviors (Scheuerman *et al.*, 2018).

[a]A wide variety of relationships exist. Here, we focus on the breakdown of one of the most common: romantic relationships.
[b]We focused explicitly on cancer to ensure a large enough pool of participants were available, given that this is one of the most commonly diagnosed serious illnesses. Moreover, experiences of people living with cancer are appropriately idiosyncratic to provide the wide range of insights to inform our study.
[c]https://commonslibrary.parliament.uk/constituency-data-uk-armed-forces-veterans-2021-census
[d]https://www.ons.gov.uk/census/planningforcensus2021/ukcensusdata

unanticipated and possibly harmful insights to unapproved others (Armstrong *et al.*, 2023).

Informational privacy—i.e., the right to control what is shared, when, and who with—is just one aspect to consider when navigating a life transition online. *Personal Privacy*—defined as the control over internal states and personal thoughts and feelings (Altman, 1975; Burgoon & Aho, 1982)—is also an important factor, particularly for people early on in their transition who are not yet ready to disclose to others. Haimson (2018), for example, found that people who are exploring their LGBTQ+ identity often set up private profiles on platforms such as Tumblr to help in processing their emotions. Nevertheless, these profiles may be algorithmically linked back to the individual's primary social media profile, via features such as friend suggestions, thereby unintentionally "outing" them (Haimson *et al.*, 2015a). Fragmenting identities across different online spaces can also make it difficult to maintain *Social Privacy*—the control of interpersonal relationships (Altman, 1975; Burgoon & Aho, 1982)—due to blurred boundaries between networks who have access to transition information and those who do not (Pinter *et al.*, 2021). Finally, poorly configured smartphones and wearable IoT devices (e.g., smart watches) invisibly

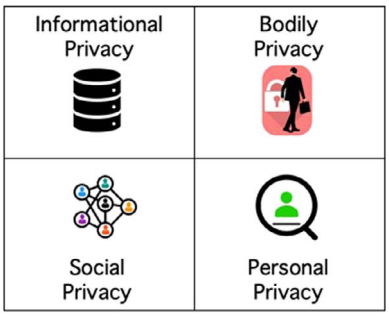

Figure 1 Four dimensions of privacy.

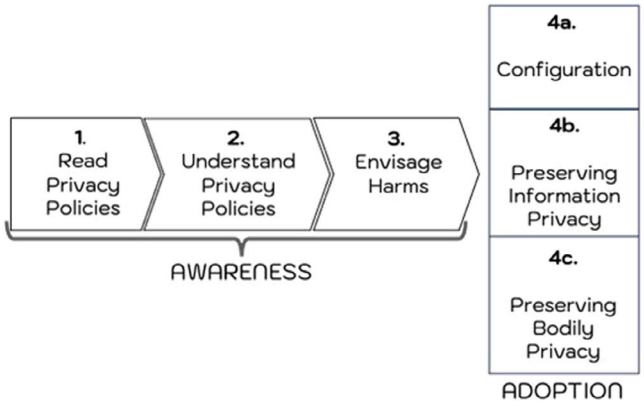

Figure 2 Managing personal data online.

and continuously capture location and activity information (Zhou & Piramithu, 2014), which can inadvertently break an individual's *Bodily Privacy*—defined as the selective control of access to the self (e.g., Altman, 1975; Burgoon & Aho, 1982). To illustrate, perpetrators of Intimate Partner Violence often utilize shared cloud storage to reestablish contact with the survivor (Leitão, 2019). While those recovering from a serious illness can find themselves exposed to manipulative advertising (Citron & Solove, 2022).

Ultimately, the ability to preserve privacy online requires due consideration of each of these components and of how they interact with one another. For example, posting an image online brings with it repercussions related to *Informational Privacy*; with metadata and/or identifiable landmarks in the background possibly also breaching *Bodily Privacy*. In reality, people may not attach great value to their privacy, being unable to envision the link between divulged personal information and potential risks and harms (Baruh *et al.*, 2017). They may incorrectly assume that malevolent actors will only target wealthy or famous users and consider themselves too insignificant to merit such attention; this could lead them to neglect their personal privacy. Many seem to lack an understanding of how to use settings that align with their personal privacy requirements (Liu *et al.*, 2011). Researchers have formulated proposals to help people to improve their privacy settings (Reinhardt *et al.*, 2015; Torre *et al.*, 2018), but these have not specifically assessed the practices and perceptions of the demographic we focus on in this study. In the next subsection, we include PETs that preserve privacy related to the paradigms proposed by Altman (1975) and Burgoon and Aho (1982).

Privacy-enhancing technologies

Heurix *et al.* (2015) explain that PETs aim to preserve: (1) *Indistinguishability* (making it impossible to distinguish one entity from other entity online); (2) *Unlinkability*, (making it impossible to link one entity to another entity of a different class, e.g., person and corresponding medical data); (3) *Deniability* (being able to plausibly deny a fact, possession, or transaction); and (4) *Confidentiality* (secrecy of data content).

Citizens might use traditional PETs to preserve their own privacy or to confound digital surveillance. Privacy-Enhancing Technologies typically encompass encryption, Virtual Private Networks, and anonymous browsers to support in the preservation of Informational, Personal, and Bodily Privacy (van Schaik & Renaud, 2024). For example, survivors of Intimate Partner Violence can make use of anonymous browsers to hide online activities that enable their escape from the perpetrator. However, to prevent unwitting information disclosure and potential breach of all four types of privacy, the most powerful PET is the configuration of platform-specific privacy-protective settings. In addition, there are other tools that can be used specifically to preserve the privacy of the "body." For example, a webcam cover can preserve an individual's need not to show their face or their surroundings while on a call. Faraday bags can prevent surveillance while someone is in public areas or in airports. Configuration of mobile devices is important, to prevent location tracking as well.

Users typically do not engage with PETs, nor do they exercise caution in allowing others to view their details on social networking websites (Aljohani *et al.*, 2016). As shown in Figure 2, managing the visibility of online data requires an initial awareness of the need for privacy. This includes knowledge and understanding of the policies that govern platforms in which an individual is active on—not always achieved since people often consider these policies to be a nuisance and time-consuming to read (Ibdah *et al.*, 2021; Obar & Oeldorf-Hirsch, 2020; Vila *et al.*, 2003)—and the potential harms they may experience if a breach in privacy occurs. If the individual traverses all the awareness steps successfully, they should then *progress from awareness to adoption* of PETs depending on their needs.

Awareness (policies and harms)

(1) Policies need to be *read*, and not merely skipped and agreed to, which evidence suggests occurs (Parfenova *et al.*, 2024).

(2) If read, they need to be *understood.* This, too, is not guaranteed because policies are often over-long and complex (Acquisti *et al.*, 2020). This leads to disengagement and misunderstandings of the privacy guarantees being provided by service providers (Rao *et al.*, 2016).

(3) The next requirement is for readers to be able to *envisage a broad set of privacy-related harms* that could arise from inadequate privacy management. This, too, is not guaranteed, with many not understanding that privacy loss can be harmful (Citron & Solove, 2022).

Adoption (using PETs to preserve privacy)

(a) *Configuration*: Actioning of fine-grained changes to privacy settings across multiple platforms and devices. This requires a high level of knowledge and consistent maintenance (Carrasco & Kerne, 2018; Duguay, 2014; Haimson *et al.*, 2015b; Buil-Gil *et al.*, 2023). Even so, such settings may not be completely infrangible. For instance, platforms may algorithmically link profiles and associated publics together through activities such

as common friend suggestions (Devito *et al.*, 2018; Haimson *et al.*, 2015a; Haimson *et al.*, 2016), while involuntary expressions (e.g., group memberships, likes, events, photographs, and friend's posts) can also leak identity (Duguay, 2014). This makes it difficult to control self-presentation (Davis & Jurgenson, 2014), and prevent privacy intrusions (Buil-Gil *et al.*, 2023).

(b) *Preserving informational, personal, and social privacy*: Identifying, selecting, and utilizing PETs to preserve Informational, Personal, and Social Privacy online. Unfortunately, this is not a simple task, since there is a general lack of awareness of these tools (Van Schaik & Renaud, 2024). Moreover, selecting the most appropriate tool requires experimentation as PETs are typically designed for the "ideal user" and do not account for the complex needs of people undergoing life transitions. By ideal user we mean: a technically competent individual who is not intimidated by technology. They understand the terminology used by the software producers and have the required cognitive and physical abilities and emotional stability to install and utilize it. This ideal user has no difficulties and experiences no barriers in progressing across the pathway listed in Figure 2. In some cases, previous partners have installed spyware on devices (Chatterjee *et al.*, 2018), which they can use to continue to eavesdrop on the person's activities after the relationship is over. Preventing this is a core part of the privacy preservation process, as is controlling the scope of disclosure through the configuration process described in (a). This may also be facilitated via the use of PETs.

(c) *Preserving bodily privacy*: Identify, select, and utilize PETs to control access to the individual's person. For example, Faraday bags could help mask an individual's movements as they prepare to break away from an abusive ex-partner. When people leave the Armed Forces, they have to regain autonomy and agency after having their lives completely controlled by their commanders. A PET can assist them in preserving their privacy during this transition.

None of these steps can be guaranteed for any demographic. We argue that the transitioners, in particular, with their specific needs and vulnerabilities, are even less likely to be able to benefit from PETs in preserving their privacy during their transition journey. In some cases, "context collapse" could occur, where multiple online audiences with differing knowledge of the transition merge into a single homogeneous group due to the transitioner's lack of engagement with granular online privacy settings. For example, Facebook typically contains a mix of network members from different facets of an individual's life, such as friends, family, and even transition-specific acquaintances (Pinter *et al.*, 2021). Users often find it difficult to partition these networks without support given the complexity of the privacy features provided by the platform (Haimson *et al.*, 2015a).

Theory: psychological need satisfaction

One of the most widely used theories dealing with psychological need satisfaction is Self-Determination Theory (SDT), which argues that meeting three innate psychological needs affords the necessary conditions for psychological growth, integrity and well-being: (1) *Autonomy* (to feel in control and have options to choose from); (2) *Competence* (to feel adequately challenged to experience mastery); and (3) *Relatedness* (to feel that one belongs) (Deci & Ryan, 2012; Gagné & Deci, 2005; Ryan & Deci, 2000). People seek to *satisfy* these needs and avoid situations in which they are *frustrated* (Opdenakker, 2021; Ryan & Deci, 2000). A number of factors could either contribute to satisfaction or frustration of these psychological needs, as follows.

(1) *Demographic characteristics* including: religion (Gul & Abrar, 2024), spirituality, age (Kebede *et al.*, 2022), gender (van der Schyff *et al.*, 2020), ethnicity (Wang & Metzger, 2024), marital status, employment status (Kyei-Blankson *et al.*, 2016), and social networks used (Zheleva *et al.*, 2012).

(2) *Digital literacy* (Park, 2013; Saritepeci *et al.*, 2024) because online privacy requires the ability to manage privacy settings and deploy privacy-protective tools.

(3) *Psychological profile*:

- *Psychological flexibility*: which is a product of six interrelated subprocesses: acceptance, defusion, self as context, present moment awareness, values, and committed action (Hayes *et al.*, 2006). Greater psychological flexibility is associated with less psychological distress (see Hayes *et al.*, 2013). This could also arguably play a role in satisfying self-determination needs.
- *Resilience*: defined as both a psychological coping process and an outcome of successfully adapting to difficult or challenging life transitions (apa.org, 2023). Resilience relates directly to "an individual's ability to maintain or restore relatively stable psychological and physical functioning when confronted with stressful life events and adversities" (Seiler & Jenewein, 2019, p. 1). Moreover, given that PETs build individual resilience, if resilience is instrumental in satisfying self-determination needs, the use of PETs could play a key role in supporting transitioners.
- *Perceived sense of control* (Jeon & Jeong, 2021): over what transition-related information is shared, and with whom; whether information about their transition leaked to an unintended audience, whether they sought support from others; harms experienced during transition and transition type.

There is evidence that people navigate different kinds of transitions more successfully if their psychological needs are satisfied (Ratelle *et al.*, 2023; Reed-Fitzke & Lucier-Greer, 2021; Vasiou *et al.*, 2024). For example, Gillison *et al.* (2008) found that need satisfaction in transitioning to secondary school led to greater quality of life. Duchesne *et al.* (2017) studied the same transition and found that satisfaction of Autonomy and Competence needs had a positive impact on their performance and adaptation. Stenling *et al.* (2021) investigated the retirement transition and how satisfaction of the basic psychological needs (Autonomy, Competence, and Relatedness) led to less depressive symptoms during retirement. Huyghebaert–Zouaghi *et al.* (2022) studied nurses and found that need satisfaction was a key driver of the most adaptive functioning during transitions. Greene *et al.* (2019) studied the transition from school to higher education and found that psychological need satisfaction mitigated concerns. While in higher education, need satisfaction improved engagement (Benlahcene *et al.*, 2021). Mulvihill (2021) studied graduates transitioning from university to employment and found that well-being was influenced by psychological need satisfaction. Given this evidence for the importance of psychological need satisfaction during other important life transitions, we will also examine this aspect for the four transitions we are focusing on. Figure 3 depicts the need satisfaction factors feeding into satisfaction of the three self-determination needs.

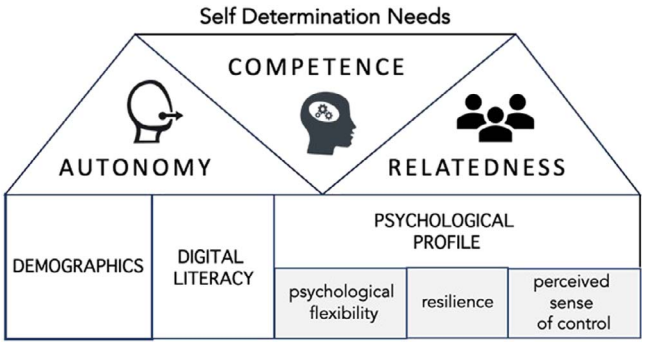

Figure 3 Factors that could either contribute to satisfaction or frustration of psychological needs.

Methods

Based on the previous discussion, this research sought to answer the following questions that explore proven privacy influences during the transition experience:

Research Question 1 (RQ1): What are the characteristics of people undergoing the different transitions and how do demographic characteristics influence their lived experience when sharing this transition online?

Research Question 2 (RQ2): How does digital literacy influence satisfaction or frustration of fundamental self-determination needs when sharing transition information online?

Research Question 3 (RQ3): How does psychological profile influence satisfaction or frustration of fundamental self-determination needs when sharing transition information online?

Research Question 4 (RQ4): What common privacy behaviors and online harms satisfy/frustrate fundamental self-determination needs when sharing transition information online?

A mixed-methods online survey (target sample size: n = 100 for each transition population) was conducted to explore the research questions. In addition to capturing demographics, personal characteristics, and transition experiences, validated psychometric instruments were embedded into the survey to measure individual psychological flexibility, resilience, digital literacy, and the extent to which the need for competence, relatedness, and autonomy were met during life transitions. The survey was deployed via Qualtrics[1], after receiving ethical approval from: (1) the Department of Computer and Information Sciences, University of Strathclyde's Ethics Committee (ID: 1794); (2) Edge Hill University (ETH2223–0002); and (3) from our funder REPHRAIN (ID: 5305).

Participants

Participants were recruited from the Prolific Participation Platform[2], with the study initially being advertised to adults over 18 years of age who resided in the U.K. and had experienced at least one of the transitions defined in Table 1. Participants self-assessed their eligibility and were provided with a participant information sheet prior to the study. Informed consent was also obtained before participants completed the online survey. Adhering to our target sample size, the survey was closed once we had recruited 100 participants for three of the life transitions (Relationship Breakdown (romantic); LGBTQ+ (coming out or gender transition); and Serious Illness (cancer)). Only 98 participants were recruited for the leaving the Armed Forces population giving 398 responses in total. We were unable to recruit our target number of participants from the U.K. in the Armed Forces group. Given that veterans from the U.K. and United States face similar challenges when leaving the Armed Forces (Hatch *et al.*, 2013), and because we needed equal numbers to support statistical analysis, we recruited 34 participants from U.S.-based Armed Forces respondents to ensure we were closer to our target for this transition population.

Measures and survey description

The survey included closed and open questions structured into four sections: (1) demographics (RQ1), (2) experiences during life transitions (RQ4), (3) digital literacy and technological affinity (RQ2), and (4) psychological profile (RQ3). A general description of the questions used in support of our research goals are provided below, while Table 2 also provides a summary of the preexisting validated scales that were implemented. We made the decision not to change the structure of these scales to ensure they remained validated and analyzed the collected data as advised by authors responsible for their creation. As a byproduct, this meant that the structure of the scales was inconsistent, e.g., the endpoints of the Likert scales used differed.

RQ1 & RQ4: demographics and online behaviors

Participants reported their age, sex, gender identity, sexual orientation, relationship status, highest education level, employment status, religious and spirituality affiliations, and ethnic group. We also asked about which transition(s) they had experienced: the survey made it possible for participants to have experienced more than one transition, but they were asked to choose and focus on their most important/significant transition when responding. Participants were also asked: when the transition(s) occurred; whether they perceived the life transition to be completed or not; support and organizations

[1] www.quatrics.com

[2] https://www.prolific.com/

Table 2 Validated scales used in the survey.

Scales	
RQ2: How does digital literacy influence satisfaction or frustration of fundamental self-determination needs?	
Digital Literacy; Affinity for Technology Interaction (ATI) Scale	Hargittai (2009); Hargittai and Hsieh (2012); Franke *et al.* (2019)
RQ3: How does psychological profile influence satisfaction or frustration of fundamental self-determination needs?	
CompACT-8 (Psychological flexibility)	Francis *et al.* (2016)
Connor–Davidson Resilience Scale (Resilience)	Connor and Davidson (2003)
Self-determination need satisfaction/frustration:	
Basic Psychological Need Satisfaction and Frustration Scale;	van der Kaap-Deeder *et al.* (2020)

accessed. A further set of questions probed whether they had shared information about their transition online, where they had done so, and if information about their transition was "leaked" by others. We also asked participants to rate how distressed they were about any data leakage on a Likert scale ranging from 1 (*not at all*) to 5 (*very*), and how satisfied they were with any support they had accessed (1 being *very dissatisfied*, and 5 being *very satisfied*). A number of free-text boxes were included so participants could expand on their answers. These allowed for further exploration of the social and technical challenges that were experienced during a transition, with an emphasis on online privacy and vulnerability.

RQ2: digital literacy

We used several validated measures to explore whether constructs related to digital literacy impacted on online behaviors and outcomes during these life transitions:

The *Digital Literacy Scale* (Hargittai, 2009; Hargittai & Hsieh, 2012): a method for studying individuals' digital literacy. The measure in this study included seven digital literacy terms that were assessed on a scale from 1 (*no understanding*) to 5 (*full understanding*). The mean score was calculated for each term, giving overall understanding from participants. Digital literacy terms used included six real ones (e.g., "phishing" and "tagging") plus one fabricated term ("proxypod") that were designed to "trap" inflated claims of literacy.

The *Affinity for Technology Interaction (ATI) Scale* (Franke *et al.*, 2019): a nine-item measure to evaluate Affinity for Technology Interaction as an interaction style based on the psychological theory of "Need for Cognition" (NFC) (Cacioppo & Petty, 1982). A Likert scale from 1 (*completely disagree*) to 6 (*completely agree*) is used, and a mean score is computed across all nine items.

RQ3: psychological profile and coping strategies

We included a number of validated psychometric measures that orient to online privacy–related outcomes as participants navigate these life transitions. This was done to establish the feasibility of using these measures in a future planned evaluation of online tools that we are developing to support others experiencing similar transitions. Measures included:

The *CompACT-8* (Francis *et al.*, 2016) is a general measure of psychological flexibility. It is comprised of eight questions that are rated on a 7-point scale from 0 (*strongly disagree*) to 6 (*strongly agree*). Submeasures include openness to experience (questions 2, 4, 7), behavioral awareness (questions 3, 6), and valued action (questions 1, 5, 8). Acceptance and Commitment Therapy (Hayes *et al.*, 2011) use these processes to support psychological flexibility. A total score of flexibility can be calculated by adding responses to all eight questions together as an overall score.

The *Connor–Davidson Resilience Scale* (Connor & Davidson, 2003): measures the self-rated resilience of participants. It is comprised of 25 items, rated on a 5-point scale from 0 (*not at all true*) to 4 (*true nearly all the time*). The possible score is from 0 to 100 and higher average scores equal greater levels of resilience.

The basic psychological need satisfaction and frustration scale

We used the measure proposed by van der Kaap-Deeder *et al.* (2020) based on SDT. It is composed of 24 items that measure the satisfaction and frustration of the psychological requirements of Autonomy, Competence, and Relatedness. This includes an amalgamation of both satisfaction and frustration items. A Likert scale of 1 (*not true at all*) to 5 (*completely true*) is used.

Data analysis

A mixed-methods approach to data analysis was adopted. Demographic and life event information were treated as separate variables, with data analyzed using statistical tests. Measurement tools were scored as recommended by the authors of the original psychometric validation papers, so that appropriate inferential statistical analysis could be undertaken. This included a range of correlation and ANOVA tests. There was no need to adopt any kind of missing-data substitution protocol. Quantitative data analysis was undertaken using SPSS v28.

Open-ended text responses were thematically analyzed (Braun & Clarke, 2019) primarily by Gibson, who had ∼10 years' experience in qualitative research to delve further into the online privacy behaviors and requirements that satisfied/frustrated our participants Self-Determination needs. Gibson familiarized themselves with the dataset through repeated reading and memoing, before developing an initial set of inductive codes using NVivo. These codes were iteratively refined via regular discussions with the rest of the research team who had personal experience of each target transition apart from leaving the Armed Forces. Themes were then derived by Gibson through grouping the stable codes together, which were again refined with the wider research team. Finally, Gibson deductively mapped these themes to the three concepts of SDT. Memos were used to capture changes in codes/themes as the analysis progressed to support reflexivity.

Results—quantitative analysis

We had intended to recruit an equal number of participants from each life transition category. Yet, since the participants were able to indicate the *primary* life event that they had experienced, some decided to focus on a transition that was different to the survey link they selected at recruitment. Consequently, the 398 participants who completed the survey were split as follows: Relationship Breakdown (Romantic) n = 118; Armed Forces (Leaving) n = 91; Serious Illness (Cancer) n = 100; and LGBTQ+ (coming out or gender transition) n = 89. This highlights the complexity and potentially overlapping nature of transition experiences.

In presenting the results, we first provide an overview of the demographics of our participants, their transitions, and online behaviors, before addressing RQ1 to RQ3 in turn.

Demographic description of survey respondents

Comparative demographic characteristics of our various subgroups are provided in Table A1. There were some notable differences in sample characteristics. For example, there was a much higher proportion of participants self-describing their own gender in the LGBTQ+ group, and those in the Serious Illness group were older than in other groups. A smaller number of participants leaving the Armed Forces and in LGBTQ+ transitions were married or in a long-term relationship, with more living apart from their "significant others" or being single.

A lower proportion of the Serious Illness group was in full-time employment: more were either not working due to illness/disability or retired. This was presumably an artifact of the specific transition or mean age. The Armed Forces group had a lower level of formal educational qualifications. While the majority did not have religious beliefs,

the percentage without religious beliefs was higher still for those experiencing Relationship Breakdown and LGBTQ+ transitions. However, a higher proportion of participants across all groups declared that they had *spiritual* beliefs.

Transgender participants were present in all groups, with higher numbers in the LGBTQ+ group. Marked differences emerged for sexual orientation across all samples, with a higher number of participants identifying as bisexual than might otherwise be expected, particularly so in the LGBTQ+ and Relationship Breakdown groups. Regarding ethnicity, we recruited a primarily White/Caucasian sample: the Relationship Breakdown and LGBTQ+ groups had the least ethnic diversity.

Life transition differences

For the majority of participants, the life transition had started in the previous 18 months (see Table A2). A few were in the early stage of a transition in the Serious Illness group, and a higher proportion of the Armed Forces sample were responding over 5 years since their transition. Compared to other groups, greater numbers of the Serious Illness and LGBTQ+ groups considered themselves to be still in transition, despite the extended passage of time since the transition commenced.

There was a high level of additional life transitions experienced by the Relationship Breakdown group, with the other populations also likely to report experiencing a Relationship Breakdown. Serious Illness was also more likely to be reported by those in the Relationship Breakdown and LGBTQ+ groups. Between 35% and 50% of all respondents indicated that they had experienced another life transition during their primary transition. More participants in the Armed Forces group reported that these other life transitions occurred *after* their primary transition, whereas more in both Serious Illness and LGBTQ+ groups reported that they occurred *before* the main transition: between 22% and 34% of participants reported that the events had co-occurred.

Unsurprisingly, due to the nature of the transition, those in the Serious Illness group were more likely to have accessed support services from stakeholders such as their healthcare provider, counselor, or a charitable organization. High percentages of the Armed Forces and LGBTQ+ groups had *not* accessed support services. All groups reported an above-neutral rating of satisfaction when support was received. This suggests that Armed Forces and LGBTQ+ participants were likely making an active choice not to access support services because they felt sufficiently satisfied with the support that was already available to them. A significant difference was reported in satisfaction with support between groups ($F(3, 184) = 2.796$, $p = .042$), with post hoc Bonferroni tests showing the Relationship Breakdown and Serious Illness groups to be independently significantly higher. This further clarifies that although the Armed Forces and LGBTQ+ groups rated their support positively, the other groups who accessed support services perceived additional benefits.

Online privacy during life transitions

Participants experiencing Serious Illness or LGBTQ+ transitions were more likely to have shared information online (see Table A3), with significant numbers responding that they did so anonymously to protect their Informational and Bodily Privacy (18.3%). Between 5.5% and 9% of participants across groups reported that they had later deleted these online posts. Much higher proportions (44.0% Serious Illness to 59.3% Armed Forces) reported that they communicated with others online (not necessarily about their transition). Some anonymously shared information about their transition (8% Armed Forces and 25% LGBTQ+).

Higher proportions in the Relationship Breakdown (33.9%) and LGBTQ+ (32.6%) transition groups reported breaches in their Social Privacy since people who they would *not* have chosen to tell face-to-face found out about their transition online—via inadvertent disclosure or information leakage. Marginally higher proportions of these found out from the transitioner themselves in the Relationship Breakdown and LGBTQ+ transition groups, i.e., through inadvertent disclosure. A significant proportion of respondents, across all groups, did not know how news had leaked. Facebook was believed to be the most likely platform for sharing this information inadvertently or through leakage across the whole sample, although a much higher proportion of the LGBTQ+ transition group reported information sharing through Instagram as well. This could be due to this transition group being younger than the other groups. The Serious Illness and Armed Forces groups reported lower levels of distress at others finding out about their transition. However, the Relationship Breakdown and LGBTQ+ group reported much higher distress in this respect. The difference was highly statistically significant [$F(3, 198) = 6.035$, $p < .001$]. This suggests that we cannot consider disclosure of life transitions to be an equivalent experience for all: there are some transitions, which by their very nature (e.g., LGBTQ+ disclosure), are inherently more distressing for other people to know about, and this may be related to the social consequences of public disclosure, such as stigma. All categories of respondent indicated a high mean level of perceived control over news of their transition being shared online, with no significant differences between groups. There was a small effect size correlation between higher distress and lower perceived control ($r = -0.17$, $p < .005$): respondents who did not feel a sense of control were more distressed and vice versa. Interventions, such as technological solutions, which increase an individual's sense of control over information disclosure (e.g., control over when and how information is shared) might, therefore, reduce distress in those groups who experienced particularly high distress about other people finding out about their transition.

Experience of online harms

The most common three harms reported across all groups were: (1) disinformation/misinformation, (2) unwelcome content, and (3) cyberbullying or trolling—see Table A4. Disinformation/misinformation were less commonly reported in the Armed Forces and Serious Illness groups. The LGBTQ+ transition group reported much higher rates of unwelcome content and cyberbullying/trolling. Serious Illness and Armed Forces groups reported slightly higher rates of targeted advertising/sale of illegal goods or services, and the Armed Forces sample reported a higher percentage of financial fraud. Hacking and identity theft were relatively rare across all cohorts, though isolated examples were reported.

Digital literacy (RQ2)

Our participants demonstrated reasonable digital literacy (Table A5) through their understanding of a subset of the technical terms embedded in the Digital Literacy Scale (Hargittai, 2009; Hargittai & Hsieh, 2012). This is unsurprising given that they were recruited through an online participation recruitment site. From the Affinity for Technology

Interaction scale (Franke *et al.*, 2019), the Relationship Breakdown (3.46) and Serious Illness (3.62) groups had slightly lower scores, though these were still well above the neutral option. Participants transitioning out of the Armed Forces had significantly higher affinity with technology (4.05).

Psychometric beliefs and coping strategies (RQ3)

We included scales to enable some initial theoretical modeling of which psychological and technological variables may help to protect against negative impacts of online harms during life transitions. Means (and *SDs*) and results of a between groups one-way ANOVA for these are presented in Tables A6 and A7. Though differences between groups are small, many are statistically significant.

With respect to privacy orientation, there were no differences on privacy perceptions as a right or other contingent privacy. However, the Serious Illness group scored lower on concerns for their own privacy, and the Relationship Breakdown group scored lower on perception of the privacy of others. With reference to SDT, the Relationship Breakdown group was significantly lower in Autonomy, Relatedness, and Competence satisfaction, and also significantly higher in Autonomy and Relatedness frustration. There was no significant difference in Competence frustration. Psychological flexibility as a sum score, and its various subcomponents, were lower in both Relationship Breakdown and LGBTQ+ transition groups. These two groups also scored lower on overall resilience than the Armed Forces and Serious Illness transition groups.

Multivariate regression analyses (RQ1 & RQ3)

Since we have described the experience of life transitions as multifaceted and multidetermined, we conducted additional multivariate analyses of the extent to which individuals felt their fundamental psychological needs were satisfied vs. frustrated. We included demographics, characteristics of the transition, digital literacy, and psychological profile variables as predictors. Our interest has been to: (1) partial out common variance in sets of predictor variables; and (2) explore unique influences over and above the effects of other predictors. For each fundamental psychological need (Autonomy, Relatedness, Competence), we performed the regression analyses for both need satisfaction and frustration as dependent variables. Table A8 in the Appendix presents the outcome of our analyses. There are three notable findings:

First, individuals undergoing breakdowns of relationships report being the least satisfied and the most frustrated during their life transition compared to those leaving the Armed Forces, experiencing Serious Illnesses, or undergoing an LGBTQ+ transition, which were all equal. Moreover: (1) those who reported online harm involving cyberbullying and trolling were frustrated to a greater extent in their Relatedness needs; (2) those who reported online harm involving illegal advertising or sales felt their Autonomy needs were satisfied to a smaller extent during the transition; and, (3) those who reported online harm involving financial fraud felt less autonomous, and more frustrated in both Relatedness and Competence needs.

Second, the **sense of control** over information related to their transition being shared online is both an important determinant of need satisfaction (across Autonomy, Relatedness, and Competence needs) and diminishes need frustration during life transitions, for all transition groups.

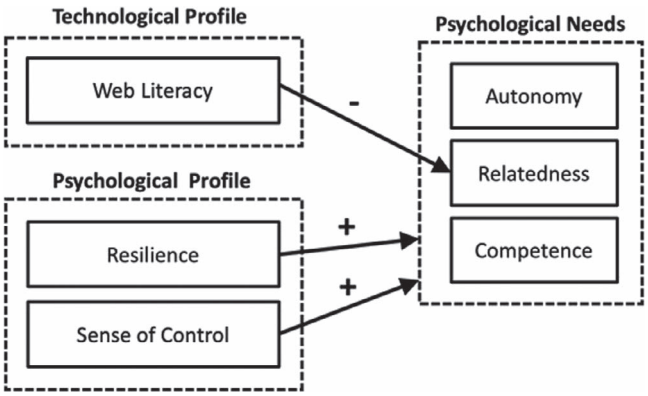

Figure 4 Factors that satisfy/frustrate psychological needs.

Third, controlling for all the characteristics of the transition (e.g., duration, multiplicity of transitions, online harms—see Table A8), demographic profile, and digital literacy of survey respondents, we found significant favorable effects of **resilience** on the satisfaction of fundamental psychological needs during life transitions. No favorable effects were detected for digital literacy variables. **Digital literacy** negatively impacted the relatedness needs of the survey respondents. Figure 4 summarizes our findings.

Results—qualitative analysis (RQ4)

In their open-ended responses, our participants discussed online privacy practices and needs that encompass the three components of SDT (Deci & Ryan, 2012). We now discuss each in turn, relating back to the quantitative insights where appropriate.

Autonomy

Participants deployed a variety of strategies to create safe spaces online that afforded greater control over who they presented their emerging identity to. These strategies would often differ based on the sensitivity of information disclosed, ranging from direct messaging and the application of privacy settings, to compartmentalizing disclosure across different accounts. Nevertheless, external factors beyond the control of the transitioner could accelerate or delay the need to disclose their personal information.

Restricting disclosures to safe spaces

A primary factor in exercising greater control over the progress of a life transition online, including how it is portrayed to others, is the ability to create safe spaces. Safe spaces, in this context, are comprised of carefully curated zones within a host platform (Pinter *et al.*, 2021) containing network members whom the transitioner deems to be supportive toward their life change: “I posted a story on the national coming out day last October. It was me with two pride flags. Only friends followed me on Instagram at the time, and my account was private, so I considered it a safe space” (LGBTQ+ Participant 35).

Safe spaces were most often curated within accounts that existed prior to our participants’ transition. Such accounts are made up of interconnected networks from all aspects of the central actor’s life (e.g., friends, family, work colleagues) who have varying degrees of knowledge about, and interaction with, the transition. Consequently, our participants made use of available privacy features, such as friend

removal or Facebook lists, to limit the scope of their disclosure, thereby exercising greater control over their Informational and Social Privacy: "I planned carefully what and how I would share . . . Before sharing I had been ruthless in clearing out my 'friends' list to include only those I see as genuine friends and people I wanted to know what was happening to me" (Serious Illness Participant 38). Direct messaging (through text and voice interfaces) also offered an alternative approach for participants who felt it was problematic to permanently remove an individual from an online space and who lacked the required digital literacy to apply more sophisticated privacy features: "I didn't post about it on Facebook or elsewhere as frankly I just didn't want to air my dirty laundry to everyone. I told those close to me and some pals I play games with online. I would likely do it exactly the same way again" (Armed Forces Participant 38).

On the other hand, participants who sought support from peers typically limited their disclosures to transition-specific spaces that existed within (e.g., private and moderated Facebook groups) or outside of (e.g., medical forums) the platforms they were active on pretransition: "I did not share anything personal online, only in anonymous support groups. I am glad I did this as it stopped people 'sensation-seeking' at my bad news" (Relationship Breakdown Participant 73); "I shared anonymously with others similarly afflicted, in a charity forum, and that gave me immense support. I would not have gotten that same support from my wider circle and I'm glad I excluded them. I had enough to deal with" (Serious Illness Participant 42). The potential anonymity offered by these spaces, along with network members' intimate knowledge of the transition process, helped our participants to share their own experiences while safeguarding their Informational and Social Privacy. Similarly, when transition information was categorized as highly sensitive—in that leakage could lead to significant harm—our participants preferred to create entirely new spaces separate from their main accounts and platforms. By starting over, they could create much more explicit boundaries on who has access to their transition information: "I made a post on my private (close people only) Instagram and changed my pronouns to (they/them) in both my main (anyone can see this one) and private Instagram accounts" (LGBTQ+ Participant 27). This may offer an alternative reason as to why the LGBTQ+ population reported being active on a wider range of platforms.

Continuous evolvement of safe spaces

Life transitions are rarely a linear process, with our participants consistently describing the need to take steps forward and backward as they constructed their new identity and adapted to the feedback received from others. Coupled with this was the ever-fluctuating structure of the safe spaces, where individuals exercised greater control over their Social Privacy through restricting or broadening network access depending on the progress of their transition. Furthermore, the need to disclose in these spaces, and the overall depth of disclosure (i.e., their Informational Privacy), could also change: "I believe as a gay man I have to come out multiple times. To friends, new friends, family, colleagues. Every time I start a new job, I have to come out again at work. This is an ongoing difficult process that happens consistently throughout life" (LGBTQ+ Participant 93).

Taking control of the transition through intentional (non)disclosure

Ultimately, our participants created safe spaces online to begin to take ownership of their transition. This could involve seeking out support to determine how to progress or making the transition real through disclosure to loved ones: "I think being selective meant I knew who was seeing what I was sharing. There is a slight feeling of wishing I didn't need to reach out to others for support, but ultimately it is what I needed at the time and part of that was talking to people online about it" (Relationship Breakdown Participant 56); "I wanted to control something and telling people was my thing as I could do it in my own time and terms. It was very depressing" (Serious Illness Participant 79). Nevertheless, some participants omitted this step, instead preferring to engage in more widescale disclosures, either because they felt at ease with their transition, or it was more convenient for them: "I put a post up publicly stating that I had cancer. It wasn't terminal and I would prefer people to let me get on with it on my own in peace" (Serious Illness Participant 6); "I found it easier to share some things on social media as to not having to tell everybody individually. Coming from a Catholic family, although I don't practice their religion myself, was quite nerve-racking and tense" (LGBTQ+ Participant 91). Others preferred to maintain their Personal Privacy and made the intentional decision not to disclose online due to fear over who will gain access to their transition information: "I would want people to find out because of my choosing and not randomly. I feel I would not have control over social media" (LGBTQ+ Participant 19). Instead, they would lurk on anonymous, transition-specific support forums to further their knowledge without actively contributing to the discussion.

Involuntary factors that impact the timeline of disclosure

The decision to disclose online could also be influenced by external factors. Some participants, for example, indicated that the physical changes arising from their transition meant it was difficult for them to keep it private: "Transitioning from male to female..and since then I have come out to friends and family. My transition involves taking hormone therapy, voice lessons, and laser hair removal" (LGBTQ+ Participant 68); "So many people knew, and I lost my hair so couldn't hide it...I would go out and people I didn't want to know would see me. It is hard to be private when you look like a cancer sufferer" (Serious Illness Participant 58). Moreover, upon sharing the transition online, recipients become co-owners of this information and any boundaries regarding further disclosure should be coconstructed with the central actor (Ngwenya *et al.*, 2016). Yet, our participants consistently described fractures in these boundaries, which required an active response to justify the situation to those the information was leaked to: "They told other people who didn't need to know that I was terminal, which I was not. People asked questions or sent me distressing messages in sympathy" (Serious Illness Participant 6); "I have heard of certain people spreading false rumors that I was dishonorably discharged, which is infuriating" (Armed Forces Participant 94). Our Relationship Breakdown population was most susceptible to having their transition information leaked online, given ex-partners could decide to share the dissolution before they were ready to. In doing so, the ex-partner often depicted a biased account of the breakdown, which our participants felt compelled to correct, particularly to overlapping networks such as friends and family: "A very significant relationship breakdown which affected me in many levels, not only emotionally but financially and changed my social circle too. I did feel locked out and not belonging anymore . . . I got looked down [on] and gossip was circling around, which effected my mental health too" (Relationship Breakdown Participant 2). This may explain why the Relationship Breakdown cohort reported the highest

rate of information leakage across the four populations, as well as the most frustration of their SDT needs.

Overall, leakage of transition information diminished our participants sense of control, heightened feelings of anxiety and distress, and altered their relationships with others, especially for those early on in their journey: "Everyone was talking about me/gossiping about me. People were making speculations and untrue rumors were circulating. I felt as though I had no control" (Relationship Breakdown Participant 48); "My main transition was probably my parents finding out about me being gay through social media. A time where I wasn't fully aware of this transition myself but suddenly under the spotlight. I was judged as a different person while still not sure who I was" (LGBTQ+ Participant 80). However, there were isolated instances in which leakage prompted the central actor to progress in their transition without negative repercussions: "I guess it meant I didn't have to do the job of coming out to as many people because some already knew as a result of Facebook posts made by other people" (LGBTQ+ Participant 69).

Factors that delayed the revelation of a transition online typically centered on aspects of Social Privacy, particularly the need to conceal information from a specific individual or population. In some circumstances, knowledge of the transition could induce harm to others: "I am glad I have not shared online as I have aged (but social media savvy) parents who are in their late eighties and live abroad. I do not want them to know anything about this situation as they would be very upset/worried" (Serious Illness Participant 46). While becoming widely visible online could also invite harm onto the transitioner: "Currently my best friend is aware of my sexuality and various online friends but I'm too scared to talk to my family about it for religious reasons. I'm in another long-distance relationship now, although in secret" (LGBTQ+ Participant 62); "There is a massive stigma attached to being medically discharged for mental health. I [am] masking [it] well" (Armed Forces Participant 58).

Competence

Competence in the transition was often developed by our participants when accessing comparable experiences and personalized support from networks present in safe spaces. Nevertheless, this was dependent on the quality of support provided, with misinformation having a negative impact on Competence. Those participants who were close to, or had experienced mastery of their transition, also described a desire to give back to the community by helping others through their life event. Finally, Competence in digital literacy was a key factor in the ability to successfully navigate a life transition online.

Accessing education from peers through safe spaces online

During the early stages of their transition, participants from each of the four target groups sought support from safe spaces comprising exclusively of peers. To illustrate, LGBTQ+ Participant 100 described how they actively "engaged in various subreddits . . . [where] I talked to LGBTQ+ friends . . . Most of my conversations [were] about how I should navigate/support the changing gender of my partner." The sense of community and belonging afforded by these online spaces, coupled with the potential to remain anonymous, led to earlier disclosure compared to pretransition spaces. Through this disclosure, participants were able to receive more personalized support to help them understand their transition and develop a pathway forward: "I was able to receive advice based off my experience and hear from people going through a similar transition" (Armed Forces Participant 67); "I was asking what would happen after my diagnosis. What to expect as others on there had been through the same" (Serious Illness Participant 62).

Passively consuming content prior to disclosure

Safe spaces constructed within anonymous platforms were also crucial in supporting participants to build enough Competence in their transition to begin disclosing online. Some described an initial preference to uphold their Personal Privacy and instead lurk in anonymous, transition-specific spaces (primarily Reddit), passively consuming content to further their knowledge of their transition, while simultaneously mitigating risk of exposure. This process would continue until they felt comfortable enough in the transition to share with others: "It involved a lot of learning on my part and then explaining the resulting feelings to my very close family and a few friends. After this I was more open to a wider group of friends and discussed it with them also" (LGBTQ+ Participant 64).

Variable quality in the information consumed

Our participants were largely positive about the quality of the information consumed in these safe spaces. First-hand accounts from peers going through a similar situation were especially useful in allowing them to predict possible outcomes of their transition, prior to choosing a way forward: "I was looking for reassurance. I was also looking to gather other ex-servicemen and women ideas and experiences after discharge" (Armed Forces Participant 31). Nevertheless, some of the advice received was described as "overly generic" due to network members' lack of intimate knowledge about the transitioner compared to their loved ones: "I also felt that speaking to strangers really offered nothing as there was no way for them to give anything more than generic advice/platitudes because they had no way of knowing me or my situation" (Relationship Breakdown Participant 44).

Furthermore, our Serious Illness cohort regularly encountered bouts of misinformation in spaces that lacked moderation from professionals, which could significantly impact their ability to cope with their transition: "I did join a cancer group, which I soon left as there were so many conflicting opinions and wrong information being given that I didn't feel comfortable staying in the group. It can be quite harmful to follow the advice of other people that are often not specialists in the field" (Serious Illness Participant 9). This contradicts the lower scores reported in the quantitative data for disinformation/misinformation but may account for why the serious illness population reported higher rates of advertising/sale of illegal goods or services. Much of the misinformation described in the qualitative data centered on the use of alternative forms of treatment such as cannabis.

Competence leads to widening disclosure and the education of others

The scale of our participants' disclosure seemed to be directly linked to their Competence in the transition. As highlighted, people toward the start of their transition preferred to limit disclosures to a solitary safe space, where network members consisted of peers or a small group of trusted individuals known to the central actor pretransition. Yet progression in the transition was accompanied by disclosure that transcended different spaces and their associated networks: "I came out as nonbinary last January to a couple of people, then to the rest of my friends in early February. Although I have not come out to any of

the older members of my family, my pronouns (they/them) are in my Instagram bio, so if they looked at my Instagram they would find out. I just don't feel like telling them" (LGBTQ+ Participant 27).

Becoming more open in their transition also afforded participants the opportunity to give back to their online community. Some described having to defend their new values against those who were undereducated on, or actively opposed, the transition: "I shared images of my partner and general life such as pride events and speaking up in support of injustice to the community" (LGBTQ+ Participant 12). While others progressed to a mentorship role where they shared advice in the same spaces that helped them to master their transition: "Somewhat anonymous thoughts and feelings (mostly those . . . perceived as more advanced, such as how [to] interpret the reasoning of those with wildly differing opinions)" (LGBTQ+ Participant 57); "Documented it and shared it across all social media platforms with the aim of reaching future service leavers to help or guide them" (Armed Forces Participant 48).

New experiences exposed via a lack of digital literacy

Ultimately, Competence in sharing the transition online was dependent on the participants' digital literacy. Although our four transition groups self-reported mean for digital literacy was high, those with lower levels, combined with their lack of knowledge on their transition, often expressed regret over their disclosures: "If I could go back, I would not share information online. Looking back, they were private events that did not need to be shared, especially with my Facebook friends who were mostly people I wasn't close with" (Relationship Breakdown Participant 95). Such participants would rush into making their transition public without due consideration for their psychological readiness to do so or the potential reach and repercussions of these disclosures: "I wish I hadn't shared so quickly. I needed time to adjust to the people around me accepting me before posting for everyone to see" (LGBTQ+ Participant 15); "I hadn't thought at the time that other people who had read it online would pass the information on" (Serious Illness Participant 16).

Some participants were aware of the need to limit access to their disclosures but lacked the technical skills to follow through. This subsequently left them exposed to breaches across all aspects of their online privacy and induced harms such as stalking: "He [ex-partner] contacted me a number of times even though he said he wouldn't if I kept him as a friend on Facebook. After I had blocked him, I knew he was still looking at my page as he liked my new 'in a relationship' post that I had posted to everyone" (Relationship Breakdown Participant 94). On the other hand, participants with greater digital literacy expressed more control over the presentation of their transition online: "Coming to terms with sexuality, and then revealing that to certain people based on trust and perceived understanding . . . I shared my relationship online; however, ensured that I had privatized all of my accounts and deleted my family" (LGBTQ+ Participant 63).

Relatedness

Participants became active in safe spaces online to enhance access to peers with similar life experiences and subsequently build a support network prior to widescale disclosure of the transition. Nevertheless, fear of the unknown could delay disclosure to certain people, while unexpected or adverse interactions online could also negatively impact Relatedness.

Widening access to support and validation

Aligning with the quantitative data described in section *Life transition differences*, our participants highlighted several barriers to accessing transition-specific support services in person. This included a lack of local services, the potential stigma attached to receiving support, and the impression that professional support was not necessary. Safe spaces online therefore offered our participants a more accessible pathway to receiving support: "[The] Internet is full of trolls and bullies, but if you can distance yourself from that and find groups that are private and secure, then these groups are there to help people" (Armed Forces Participant 6). Such spaces were abundant and diverse but typically centered on peer-to-peer support, with the main exception being medical forums moderated by professionals to alleviate misinformation—a factor that may explain the lower rates of misinformation reported by our Serious Illness cohort. Participants were appreciative of the community spirit displayed across these spaces and the moderation rules and privacy settings set in place to protect their Informational, Social, and Bodily Privacy, including the ability to contribute anonymously. As such, feelings of Relatedness would increase, particularly when network members shared experiences similar to those of the transitioner: "I was able to relate to their experiences, and they could relate to mine and support each other" (Serious Illness Participant 51). Similarly, Relatedness increased when wide-reaching disclosures were met by positive feedback, offers of support, and reassurance from network members: "A lot of positive comments that made me feel reassured that I was supported. The post helped to alleviate the shame element around being discharged" (Armed Forces Participant 58).

Building a support network

Relatedness was typically lowest at the start of our participants' transitions as they prioritized Social Privacy by withholding information from their loved ones, while comprehending how they fit into their new communities. Consequently, participants would seek out safe spaces comprised of peers to experiment with their new identity and build up a network of support prior to widescale disclosure. This was particularly true for our LGBTQ+ cohort who faced the prospect of coming out to people opposed to that lifestyle. The informational and emotional support afforded by peers who had "come out" in the past eased this process: "I think I am satisfied with the way I shared this information and if anything, it was the support that I received from my online friends that made me ever feel comfortable enough to come out to anyone in real life" (LGBTQ+ Participant 14).

Fear of the unknown

Relatedness could be negatively impacted by the central actor's inexperience with the transition. Prior to sharing their life event online, our participants critically evaluated their relationships with others to judge potential reactions to the disclosure of their transition. This was a difficult process to get right, with participants often swaying toward being overly critical, especially when disclosure could lead to harm: "Looking back I think I viewed my peer group too negatively and believe now they would have a positive response as opposed to the negative one I assumed I would face. I think I would have found lots of support had I shared it publicly" (LGBTQ+ Participant 14). Fear of the unknown can therefore restrict the central actor's access to support networks significantly and stunt their progression in the transition.

Unexpected or adverse reactions to the transition

Finally, the sense of Relatedness could also be adversely affected by negative interactions with others. Disclosure online did not always go as envisioned, with participants consistently finding themselves having to justify their transition to others and sidestep negative feedback: "I found myself constantly justifying my decision to people" (Armed Forces Participant 18); "awkward questions, often overstepping personal boundaries. Holding me accountable or representative of my minority group, viewing it as a primary aspect of my character" (LGBTQ+ Participant 70). This even occurred in online spaces thought to be safe such as transition-specific, moderated Facebook groups and forums: "Sometimes people shared more negative experiences than positive" (Serious Illness Participant 51). While others experienced harm when their expected support networks failed to reach out: "I wanted to post on social media [for] people to be aware. It only distressed me when people did not bother to ask me" (Relationship Breakdown Participant 93). Ultimately, negative interactions could prompt breakdowns in relationships—"I lost most everyone I thought was close to me" (Armed Forces Participant 97); "They felt I was lying. They were embarrassed by me and told me to delete it. I felt ashamed" (LGBTQ+ Participant 56)—and lead to setbacks in the central actor's transition: "I felt ashamed and unsure of myself despite initially feeling confident enough to share this about my life. It set me back on my transition" (LGBTQ+ Participant 56).

Discussion

This study aimed to understand the population characteristics of four life transition groups and how their fundamental psychological needs are satisfied/frustrated while navigating their transitions online with desired levels of privacy. We considered four transition types, the digital literacy, and psychological profiles of survey respondents (controlling for their demographics), in addition to their online behaviors, and the nature of harms experienced. From our quantitative data, we found that two features of transitions—resilience, and a sense of control over what transition-related information was shared and with whom—positively impact the satisfaction of fundamental psychological needs of Autonomy, Relatedness, and Competence during life transitions. Our qualitative insights suggest that sense of control (Autonomy) is largely dependent on the transitioner's ability to fragment their social participation online, restricting transition-specific disclosures to what they consider safe spaces comprised of individuals supportive toward the transition. Spaces that were compromised, either through loose privacy settings or the mistrust placed in others, would often result in setbacks to the transition, given the negative feedback that may be received, as did uncontrollable factors such as changes in physical appearance and communication partners breaking coconstructed rules of disclosure.

Notably, resilience enhanced need satisfaction and diminished need frustration *irrespective* of type of transition and controlling for all other factors including type of online harm. This suggests that the design of bespoke PETs may benefit from offering opportunities to develop psychological resilience to those going through transitions. This is a novel insight for informing the design of PETs in the life transitions domain and one possible opportunity exists in supporting the transitioner to identify, create, and maintain appropriate safe spaces online. Our qualitative data suggests that resilience increased when accessing informational or emotional support online and that the overall nature of the safe spaces was linked to the goals of the transitioners. Those seeking informational support preferred to access moderated groups and anonymous forums comprised exclusively of peers who were able to share similar life experiences. Here, some participants protected their Psychological Privacy in addition to their Informational Privacy, by passively consuming content in anonymous spaces to ensure they felt educated enough and at ease with their transition before disclosing to others. People accessing emotional support demonstrated more diverse disclosure practices, creating safe spaces in existing profiles through the application of privacy settings and in entirely new platforms when greater boundary regulation was required, e.g., when disclosure could lead to stigmatization and harm. Nevertheless, their Social Privacy could be difficult to maintain since the structure of these spaces and the depth of disclosure within them would change as the central actor took steps forward and backward within them.

Linking these results to the Haimson *et al.* (2021) major life events taxonomy, the four life transitions we considered require a high degree of social readjustment, which was originally defined by Holmes and Rahe (1967) as: "the amount and duration of change in one's accustomed pattern of life resulting from various life events." This further emphasizes the important role resilience can play in successfully adapting to major life changes. Moreover, Haimson *et al.* (2021) found that people are more likely to share events online that incur substantial social readjustment, yet the sharing practices needed to do so safely can be more complex due to the sensitive nature of the transition. To illustrate, positive developments within a transition, such as cancer entering remission, are more often shared across an individual's online networks. Yet our qualitative data showed that disclosures relating to a stigmatized identity, or negative events with high social readjustment (e.g., mental health issues), often require more considerate disclosures to audiences separate from the central actor's traditional networks (Haimson *et al.*, 2021). This may further explain why the sense of control over what transition-related information was shared and whom it was shared with positively impacts the satisfaction of fundamental psychological needs. Our LGBTQ+ participants, for example, often fragmented their online social participation, where they continued to portray their *past identity* in existing spaces made up of pretransition networks, while in parallel seeking out, creating, and engaging in transition-specific spaces to experiment with their *emerging identity*. Previous literature highlights that little overlap occurs between the networks embedded in these spaces beyond a few trusted individuals until the central actor is ready to collapse their multiple identities into one (Buss *et al.*, 2022; Coker, 2022; Duguay, 2014; Haimson, 2018; Haimson *et al.*, 2016, 2015a, 2015b; Pinter *et al.*, 2021; Talbot *et al.*, 2022). Those experiencing mental health difficulties as a result of leaving the Armed Forces may also receive opposition to their disclosures due to the hypermasculine values associated with military service. Consequently, they often prefer to disclose information related to their mental health in spaces comprised of peers who are going through similar circumstances and are thus able to relate (Semaan *et al.*, 2016, 2017).

Reflection on RQs

A surprising insight is that digital literacy had an *adverse* effect on Relatedness—the sense of belonging. We speculate that digital literacy brought with it a certain cynicism around the authenticity and depth of connections that could be constructed online. This is highlighted in our qualitative data, where some participants indicated that they were

overly critical when evaluating their relationship with others prior to tailored disclosure. Furthermore, participants who chose to disclose in anonymous spaces would sometimes have low expectations regarding the quality of support that could be provided due to network members' lack of intimate knowledge about them and their situation. Others, however, appreciated wider access to peers with similar life experiences.

We now return to our research questions:

RQ1: How do demographic characteristics influence their lived experience when sharing this transition online?

We found that transitions due to relationship breakdowns were the most taxing of all online. Our qualitative data suggests that this may be a result of the significant overlap in networks between the transitioner and their ex-partner, and the potential for both parties to have control over disclosure from the offset. None of the other factors (e.g., age, gender, religion, etc.) had any significant impact on self-determination needs.

RQ2: How does digital literacy influence satisfaction or frustration of fundamental self-determination needs when sharing transition information online?

Those leaving the Armed Forces have the highest levels of technological affinity, which might make it possible for them to manage their online privacy more effectively. However, we did not detect any impact of technological affinity, and, surprisingly, digital literacy appeared to *frustrate* relatedness need satisfaction during transitions.

RQ3: How does psychological profile influence satisfaction or frustration of fundamental self-determination needs when sharing transition information online?

Resilience and a perceived sense of control had a fundamental influence on psychological need *satisfaction*. This provides important evidence as to what kinds of psychological skill-building should be incorporated into the development of PETs to ensure optimal psychological outcomes for those undergoing significant life transitions. A starting point may be supporting transitioners to identify, create, and maintain appropriate safe spaces online.

RQ4: What common privacy behaviors and online harms satisfy/frustrate fundamental self-determination needs when sharing transition information?

Autonomy: Sense of control over the transition was increased by limiting disclosure and social interaction to safe spaces online comprised of networks deemed supportive of the transition. The structure of these spaces, and the depth of disclosure within, is dependent on the goals of the central actor and the overall sensitivity of the transition information. Networks comprising these spaces could consist of peers who provide informational and emotional support, close friends and family, and scarcely a combination of both. Yet it was important to continuously manage access to safe spaces given the central actor could take steps backward and forward in their transition. Autonomy could be diminished by external factors such as physical changes that brought with it the need to disclose. While some participants preferred to engage in widescale or nondisclosure of the transition from the offset to exert more control over how it is shared.

Competence: Safe spaces online increased Competence by facilitating access to informational and emotional support (especially from peers with similar experiences), while restricting disclosure to intended audiences only. Anonymous spaces were particularly useful in supporting participants to build enough Competence in their transition to begin disclosing their own experiences. The scale of our participants' disclosure continued to expand as their Competence increased, eventually culminating in a desire to become public and give back to their community. Ultimately, the ability to manage safe spaces was dependent on participants' Competence in applying the necessary privacy features, i.e., their digital literacy.

Relatedness: Safe spaces online offered wider access to support from peers who shared similar life experiences. This facilitated the creation of support networks that guided the central actor in sharing the transition more widely. Relatedness could be negatively impacted by the fear of the unknown, where participants delayed disclosure due to uncertainty over how others may react. Finally, the infiltration of safe spaces, either through lax privacy settings or the mistrust placed in others, could lead to negative feedback that also impacted the sense of Relatedness.

Research implications

Our findings about the way resilience contributes toward the satisfaction of self-determination needs reiterates conclusions from the wider literature including studies that investigated other life transitions, e.g., Perlman *et al.* (2017). Similarly, the influence of a perceived sense of control being beneficial is unsurprising given that a sense of control can contribute to the Autonomy need being satisfied (Eccles *et al.*, 1991; Silk *et al.*, 2003). It is therefore imperative that future research centers on finding ways to enhance these perceptions in people who have or are entering a transition period.

In contrast, the negative link between digital literacy and Relatedness (with no influence on Competence and Autonomy) was surprising, given that many interventions that aim to improve privacy-related behaviors will focus, first and foremost, on awareness and upskilling (Pötzsch, 2009; Soumelidou & Tsohou, 2021). Our qualitative data would suggest that such an approach is counterproductive, given that people undergoing life transitions online often rely heavily on others for support, meaning satisfying their Relatedness needs would be of greater importance. Nevertheless, this may be an artifact of our narrow stance on digital literacy. Eshet (2012) explains that digital literacy comprises: photo-visual literacy, reproduction literacy, branching literacy, information literacy, socio-emotional literacy, and real-time thinking. While Purnama *et al.* (2021) found that digital literacy had to be combined with parental mediation to reduce elementary students' risky online practices. In other words, digital literacy on its own did not make a difference. Consequently, future research should investigate the impact each component of digital literacy may have on the satisfaction or frustration of self-determination needs, either separately or when combined with others.

Practical implications

When providing support to an individual undergoing a transition, it is important to recognize that: (1) the transitioner may not be aware of the need to limit the information they divulge online, as shown by

the participants who expressed regret in the way they disclosed. This is something supporters should broach at the earliest convenience; (2) People going through a relationship breakdown manifested the least satisfaction and most frustration of self-determination needs. As such, they require more support in navigating the intricacies of their transition online, particularly when continuing contact with their ex-partner is unavoidable; and (3) Building personal resilience is essential, as it eases the transition process.

Likewise, designers of PETs should consider the need to support transitioners in enhancing their agency and Autonomy, given that the sense of being control is especially influential in satisfying self-determination needs. A first step is likely to be providing transitioners with appropriate and easily configurable PETs that support in the identification, creation, and maintenance of safe spaces online. However, the mere availability of tools might be insufficient, so research should be undertaken into a range of interventions targeting this demographic. One example could be a tool that monitors disclosure across the suite of online spaces an individual is active in, highlighting possible privacy breaches as they occur. This is particularly useful as the structure of online spaces change to reflect movement in the individual's transition, or when network members span multiple different spaces, meaning they can build a more coherent understanding of the transitioner's position by linking smaller disclosures together (Nicol *et al.*, 2022).

Support is also required to rebuild transitioners satisfaction of their self-determination needs if a breach in privacy occurs. For example, our participants who experienced cyberbullying and trolling expressed frustration in their Relatedness needs, those targeted by illegal advertising or sales reported lower rates of satisfaction regarding their need for Autonomy, and people who experienced financial fraud expressed reduced Autonomy, and their Relatedness and Competence needs were frustrated.

Limitations

Our study recruited people going through four very different transitions. There are naturally a large range of other transitions that people can and do undergo, which are equally or even more disruptive. For example, while we studied people leaving the Armed Forces, the transition from civilian life to serving would undoubtedly be far more difficult, especially if the individual is conscripted during wartime. We also focused on life-limiting serious illness, specifically cancer, which was reasonable given its prevalence across the population. Even so, there are other illnesses that are not life limiting but a diagnosis of one of these would undoubtedly constitute a significant lifetime transition. Examples are: multiple sclerosis, rheumatoid arthritis or Crohne's disease—all of which mandate adjustments to lifestyle and are likely to require great resilience from the transitioner. Such transitions offer fruitful avenues for more research to confirm or deny our findings. An extensive taxonomy of other possible life events is provided by Haimson *et al.* (2021). Some participants completed the survey for one transition but chose to respond to answers under a different transition (see Table A1 in Appendix), which may have impacted the results, as could the above-average digital literacy reported by our participants.

Conclusion

This study is the first to focus on the privacy needs of individuals going through a variety of life's significant and disruptive transitions. The use of PETs would be valuable, but PETs are currently not tailored to this demographic, because their specific privacy needs have not yet been studied. We found that the PETs ought to build users' resilience and perception of being in control, which are the greatest needs to be satisfied to ease the transition process. This could be achieved by supporting the transitioner to identify, create, and maintain safe spaces online that limit disclosure to those deemed supportive of the life event.

Data availability

The data underlying this article cannot be shared publicly due to the sensitive nature of the transitions experienced by our participants and the potential for reidentification. The data will be shared on reasonable request to the corresponding author.

Conflicts of interest

None declared.

Acknowledgements

This research was supported by the UKRI Engineering and Physical Sciences Research Council, grant reference number EP/W032473/1-AP4L: Adaptive PETs to Protect & emPower People during Life Transitions. We thank the anonymous reviewers for their thoughtful comments that helped us to improve this paper and also the participants who shared their online disclosure and privacy experiences.

References

Acquisti, A., Brandimarte, L., & Loewenstein, G. (2020). Secrets and likes: The drive for privacy and the difficulty of achieving it in the digital age. *Journal of Consumer Psychology*, **30**, 736–758. https://doi.org/10.1002/jcpy.1191.

Aljohani, M., Nisbet, A., & Blincoe, K. (2016) A survey of social media users privacy settings & information disclosure. In M. Johnstone (ed), *The proceedings of 14th Australian information security management conference*, 5–6 December, 2016, pp. 67–75. Edith Cowan University.

Altman, I. (1975). *The environment and social behavior: Privacy, personal space, territory, and crowding*. Brooks/Cole Publishing Company.

apa.org. American Psychological Association (APA), 2026. Resilience. https://www.apa.org/topics/resilience.

Armstrong, A., Briggs, J., Moncur, W., Carey, D. P., Nicol, E., & Schafer, B. (2023). Everyday digital traces. *Big Data & Society*, **10**, 1–13. https://doi.org/10.1177/20539517231213827.

Baruh, L., Secinti, E., & Cemalcilar, Z. (2017). Online privacy concerns and privacy management: A meta-analytical review. *The Journal of Communication*, **67**, 26–53. https://doi.org/10.1111/JCOM.12276.

Benlahcene, A., Kaur, A., & Awang-Hashim, R. (2021). Basic psychological needs satisfaction and student engagement: The importance of novelty satisfaction. *Journal of Applied Research in Higher Education*, **13**, 1290–1304. https://doi.org/10.1108/JARHE-06-2020-0157.

Brandtzæg, P. B., Lüders, M., & Skjetne, J. H. (2010). Too many Facebook "friends"? Content sharing and sociability versus the need for privacy in social network sites. *International Journal of Human–Computer Interaction*, **26**, 1006–1030. https://doi.org/10.1080/10447318.2010.516719.

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, **11**, 589–597. https://doi.org/10.1080/2159676X.2019.1628806.

Buil-Gil, D., Kemp, S., Kuenzel, S., Coventry, L., Zakhary, S., Tilley, D., & Nicholson, J. (2023). The digital harms of smart home devices:

a systematic literature review. *Computers in Human Behavior*, **145**, 107770. https://doi.org/10.1016/j.chb.2023.107770.

Burgoon, J. K., & Aho, L. (1982). Three field experiments on the effects of violations of conversational distance. *Communications Monographs*, **49**, 71–88. https://doi.org/10.1080/03637758209376073.

Buss, J., Le, H., & Haimson, O. L. (2022). Transgender identity management across social media platforms. *Media, Culture & Society*, **44**, 22–38. https://doi.org/10.1177/01634437211027106.

Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social Psychology*, **42**, 116–131. https://doi.org/10.1037/0022-3514.42.1.116.

Campos, J. N. (2022). *Stress experiences and outcomes in diverse college students: Applying the stress process model*. [Doctoral dissertation]. California State University.

Carrasco, M., & Kerne, A. (2018). Queer visibility: Supporting LGBT+ selective visibility on social media. In R. L. Mandryk, M. Hancock, M. Perry, & A. L. Cox (Eds.), *Proceedings conference on human factors in computing systems*. (pp. 1–12). ACM. https://doi.org/10.1145/3173574.3173824

Chatterjee, R., Doerfler, P., Orgad, H., Havron, S., Palmer, J., Freed, D., Levy, K., Dell, N., McCoy, D., & Ristenpart, T. (2018). The spyware used in intimate partner violence. In B. Parno, & C. Kruegel (Eds.), *2018 IEEE symposium on security and privacy (SP)* (pp. 441–458). IEEE. https://doi.org/10.1109/SP.2018.00061

Citron, D. K., & Solove, D. J. (2022). Privacy harms. *The Boston University Law Review*, **102**, 793.

Coker, M. C. (2022). What to withhold and when to disclose: Gender transitions and privacy management on social media. *Qualitative Research Reports in Communication*, **23**, 39–45. https://doi.org/10.1080/17459435.2021.1929425.

Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, **18**, 76–82. https://doi.org/10.1002/da.10113.

Davis, J. L., & Jurgenson, N. (2014). Context collapse: Theorizing context collusions and collisions. *Information, Communication & Society*, **17**, 476–485. https://doi.org/10.1080/1369118X.2014.888458.

Deci, E. L., & Ryan, R. M. (2012). Self-determination theory. *Handbook of Theories of Social Psychology*, **1**, 416–436.

Devito, M. A., Walker, A. M., & Birnholtz, J. (2018). "Too gay for Facebook": Presenting LGBTQ+ identity throughout the personal social media ecosystem. *Proceedings of the ACM on Human-Computer Interaction*, **2**, 44. https://doi.org/10.1145/3274313.

Dimond, J. P., Fiesler, C., & Bruckman, A. S. (2011). Domestic violence and information communication technologies. *Interacting with Computers*, **23**, 413–421. https://doi.org/10.1016/J.INTCOM.2011.04.006.

Dosono, B., Rashidi, Y., Akter, T., Semaan, B., & Kapadia, A. (2017). Challenges in transitioning from civil to military culture: Hyper-selective disclosure through ICTs. *Proceedings of the ACM on Human-Computer Interaction*, **1**, 23. https://doi.org/10.1145/3134676.

Duchesne, S., Ratelle, C. F., & Feng, B. (2017). Psychological need satisfaction and achievement goals: Exploring indirect effects of academic and social adaptation following the transition to secondary school. *Journal of Early Adolescence*, **37**, 1280–1308. https://doi.org/10.1177/02724316166595.

Duguay, S. (2014). "He has a way gayer Facebook than I do": Investigating sexual identity disclosure and context collapse on a social networking site. *New Media & Society*, **18**, 891–907. https://doi.org/10.1177/1461444814549930.

Eccles, J. S., Buchanan, C. M., Flanagan, C., Fuligni, A., Midgley, C., & Yee, D. (1991). Control versus autonomy during early adolescence. *Journal of Social Issues*, **47**, 53–68. https://doi.org/10.1111/j.1540-4560.1991.tb01834.x.

Eshet, Y. (2012). Thinking in the digital era: a revised model for digital literacy. *Issues Informing Science and Information Technology*, **9**, 267–276.

Fox, J., & Ralston, R. (2016). Queer identity online: informal learning and teaching experiences of LGBTQ individuals on social media. *Computers in Human Behavior*, **65**, 635–642. https://doi.org/10.1016/J.CHB.2016.06.009.

Francis, A. W., Dawson, D. L., & Golijani-Moghaddam, N. (2016). The development and validation of the comprehensive assessment of acceptance and commitment therapy processes (CompACT). *Journal of Contextual Behavioral Science*, **5**, 134–145. https://doi.org/10.1016/j.jcbs.2016.05.003.

Franke, T., Attig, C., & Wessel, D. (2019). A personal resource for technology interaction: development and validation of the affinity for technology interaction (ATI) scale. *International Journal of Human–Computer Interaction*, **35**, 456–467. https://doi.org/10.1080/10447318.2018.1456150.

Freed, D., Palmer, J., Minchala, D., Levy, K., Ristenpart, T., & Dell, N. (2017). Digital technologies and intimate partner violence: A qualitative analysis with multiple stakeholders. *Proceedings of the ACM on Human–Computer Interaction*, **1**, 1–22. https://doi.org/10.1145/3134681.

Freed, D., Palmer, J., Minchala, D., Levy, K., Ristenpart, T., & Dell, N. (2018). "A stalker's paradise": How intimate partner abusers exploit technology. *Proceedings Conference on Human Factors in Computing Systems*, **1**, 1–13. https://doi.org/10.1145/3173574.3174241.

Freed, D., Havron, S., Tseng, E., Gallardo, A., Chatterjee, R., Ristenpart, T., & Dell, N. (2019). "Is my phone hacked?" Analyzing clinical computer security interventions with survivors of intimate partner violence. *Proceedings of the ACM on Human–Computer Interaction*, **3**, 1–24. https://doi.org/10.1145/3359304.

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, **26**, 331–362. https://doi.org/10.1002/job.322.

Gibson, R. C., Meiklem, R., Moncur, W., & Ruthven, I. (2025). Online information disclosure and information privacy practices during significant life transitions: A scoping review. In G. Buchanan, H. Liu, D. McKay, & D. Oard (Eds.), *CHIIR'25: ACM SIGIR conference on human information interaction and retrieval*, 42–56. ACM. https://doi.org/10.1145/3698204.3716445.

Gillison, F., Standage, M., & Skevington, S. (2008). Changes in quality of life and psychological need satisfaction following the transition to secondary school. *The British Journal of Educational Psychology*, **78**, 149–162. https://doi.org/10.1348/000709907X209863.

Giusti, A., Nkhoma, K., Petrus, R., Petersen, I., Gwyther, L., Farrant, L., Venkatapuram, S., & Harding, R. (2020). The empirical evidence underpinning the concept and practice of person-centred care for serious illness: A systematic review. *BMJ Global Health*, **5**, e003330. https://doi.org/10.1136/bmjgh-2020-003330.

Greene, N. R., Jewell, D. E., Fuentes, J. D., & Smith, C. V. (2019). Basic need satisfaction in the parental relationship offsets millennials' worries about the transition to college. *The Journal of Social Psychology*, **159**, 125–137. https://doi.org/10.1080/00224545.2019.1570905.

Gul, F., & Abrar, M. J. (2024). *The interaction of religion and technology: Ethical considerations*. [PhD Dissertation]. Department of Islamic Studies, University of Faisalabad.

Haimson, O. L. (2018). Social media as social transition machinery. *Proceedings of the ACM on Human Computer Interaction*, **2**, 63:1–63:21. https://doi.org/10.1145/3274332.

Haimson, O. L., Bowser, A. E., Melcer, E. F., & Churchill, E. F. (2015a). Online inspiration and exploration for identity reinvention. In G. Begole, B. Kim, J. McKay, K. Inkpen, & W. Woo (Eds.), *CHI'15: Proceedings of the 33rd annual ACM conference on human factors in computing systems*, (pp. 3809–3818). ACM. https://doi.org/10.1145/2702123.2702270

Haimson, O. L., Brubaker, J. R., Dombrowski, L., & Hayes, G. R. (2015b). Disclosure, stress, and support during gender transition on Facebook. In Cosley, D., Forte, A., Ciolfi, L., & McDonald, D. (Eds.) *CSCW 2015—Proceedings of the ACM international conference on computer-supported cooperative work and social computing*, 1176–1190. ACM. https://doi.org/10.1145/2675133.2675152

Haimson, O. L., Brubaker, J. R., Dombrowski, L., & Hayes, G. R. (2016). Digital footprints and changing networks during online identity transitions. *Proceedings Conference on Human Factors in Computing Systems*, 1, 2895–2907. https://doi.org/10.1145/2858036.2858136.

Haimson, O. L., Carter, A. J., Corvite, S., Wheeler, B., Wang, L., Liu, T., & Lige, A. (2021). The major life events taxonomy: Social readjustment, social media information sharing, and online network separation during times of life transition. *Journal of the Association for Information Science and Technology*, **2021**, 933–947. https://doi.org/10.1002/asi.24455.

Hargittai, E. (2009). An update on survey measures of web-oriented digital literacy. *Social Science Computer Review*, **27**, 130–137. https://doi.org/10.1177/0894439308318213.

Hargittai, E., & Hsieh, Y. P. (2012). Succinct survey measures of web-use skills. *Social Science Computer Review*, **30**, 95–107. https://doi.org/10.1177/0894439310397146.

Hatch, S. L., Harvey, S. B., Dandeker, C., Burdett, H., Greenberg, N., Fear, N. T., & Wessely, S. (2013). Life in and after the armed forces: Social networks and mental health in the UK military. *Sociology of Health & Illness*, **35**, 1045–1064. https://doi.org/10.1111/1467-9566.12022.

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. *Behaviour Research and Therapy*, **44**, 1–25. https://doi.org/10.1016/j.brat.2005.06.006.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2011). *Acceptance and commitment therapy: The process and practice of mindful change*. Guildford Press.

Hayes, S. C., Levin, M. E., Plumb-Vilardaga, J., Villatte, J. L., & Pistorello, J. (2013). Acceptance and commitment therapy and contextual behavioral science: Examining the progress of a distinctive model of behavioral and cognitive therapy. *Behavior Therapy*, **44**, 180–198. https://doi.org/10.1016/j.beth.2009.08.002.

Herron, D., Moncur, W., & Van Den Hoven, E. (2017). Digital decoupling and disentangling: Towards design for romantic break up. In O. Mival, M. Smyth, & P. Dalsgaard (Eds.), *DIS 2017—Proceedings of the 2017 ACM conference on designing interactive systems*, 1175–1185. ACM. https://doi.org/10.1145/3064663.3064765.

Heurix, J., Zimmermann, P., Neubauer, T., & Fenz, S. (2015). A taxonomy for privacy enhancing technologies. *Computers & Security*, **53**, 1–17. https://doi.org/10.1016/j.cose.2015.05.002.

Hinderaker, A. (2015). Severing primary ties: Exit from totalistic organizations. *Western Journal of Communication*, **79**, 92–115. https://doi.org/10.1080/10570314.2014.943422.

Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, **11**, 213–218. https://doi.org/10.1016/0022-3999(67)90010-4.

Hulbert-Williams, L., & Hastings, R. P. (2008). Life events as a risk factor for psychological problems in individuals with intellectual disabilities: a critical review. *Journal of Intellectual Disability Research*, **52**, 883–895. https://doi.org/10.1111/j.1365-2788.2008.01110.x.

Huyghebaert-Zouaghi, T., Morin, A. J., Forest, J. *et al.* (2022). A longitudinal examination of nurses' need satisfaction profiles: A latent transition analysis. *Current Psychology*, **41**, 4837–4859. https://doi.org/10.1007/s12144-020-00972-1.

Ibdah, D., Lachtar, N., Raparthi, S. M., & Bacha, A. (2021). "Why should I read the privacy policy, I just need the service": A study on attitudes and perceptions toward privacy policies. *IEEE Access*, **9**, 166465–166487. https://doi.org/10.1109/ACCESS.2021.3130086.

Isika, N., Mendoza, A., & Bosua, R. (2020). "I need to compartmentalize myself": Appropriation of Instagram for chronic illness management. *ACSW '20: Proceedings of the Australasian Computer Science Week Multiconference, 1*. ACM. https://doi.org/10.1145/3373017.3373040.

Jeon, S., & H. Jeong (2002). The effect of social exclusion on privacy concern and intention to provide personal information: Focused on perceived sense of control. *Journal of Digital Convergence*, **19**, 151–161. https://doi.org/10.14400/JDC.2021.19.10.151.

van der Kaap-Deeder, J., Soenens, B., Ryan, R., & Vansteenkiste, M. (2020). *Manual of the basic psychological need satisfaction and frustration scale (BPNSFS)*, 8. Ghent University, Belgium.

Kebede, A. S., Ozolins, L. L., Holst, H., & Galvin, K. (2022). Digital engagement of older adults: Scoping review. *Journal of Medical Internet Research*, **24**, e40192. https://doi.org/10.2196/40192.

Krasnova, H., Spiekermann, S., Koroleva, K., & Hildebrand, T. (2010). Online social networks: Why we disclose. *Journal of Information Technology*, **25**, 109–125. https://doi.org/10.1057/jit.2010.6.

Kyei-Blankson, L., Iyer, K. S., & Subramanian, L. (2016). Social networking sites: College students' patterns of use and concerns for privacy and trust by gender, ethnicity, and employment status. *International Journal of Information and Communication Technology Education (IJICTE)*, **12**, 62–75. https://doi.org/10.4018/IJICTE.2016100106.

Leitão, R. (2019). Technology-facilitated intimate partner abuse: A qualitative analysis of data from online domestic abuse forums. *Human–Computer Interaction*, **36**, 203–242. https://doi.org/10.1080/07370024.2019.1685883.

Lerner, A., He, H. Y., Kawakami, A., Zeamer, S. C., & Hoyle, R. (2020). Privacy and activism in the transgender community. In R. Bernhaupt, F. Mueller, D. Verweij, J. Andres, J. McGrenere, A. Cockburn, I. Avellino, A. Goguey, P. Bjørn, S. Zhao, B. P. Samson, & R. Kocielnik (Eds.), *Proceedings conference on human factors in computing systems*. ACM. https://doi.org/10.1145/3313831.3376339.

Liu, Y., Gummadi, K. P., Krishnamurthy, B., & Mislove, A. (2011). Analyzing Facebook privacy settings: User expectations vs. reality. In P. Thiran, & W. Willinger (Eds.), *Proceedings of the ACM SIGCOMM conference on internet measurement conference*, 61–70. ACM. https://doi.org/10.1145/2068816.2068823.

Macmillan Cancer Support. (2022). *Statistics Fact Sheet*. https://www.macmillan.org.uk/dfsmedia/

Marshall, T. C. (2012). Facebook surveillance of former romantic partners: Associations with postbreakup recovery and personal growth. *Cyberpsychology, Behavior and Social Networking*, **15**, 521–526. https://doi.org/10.1089/cyber.2012.0125.

Matthews, T., O'Leary, K., Turner, A., Sleeper, M., Woelfer, J. P., Shelton, M., Manthorne, C., Churchill, E. F., & Consolvo, S. (2017). Stories from survivors: Privacy & security practices when coping with intimate partner abuse. . In G. Mark, S. Fussell, C. Lampe, M. C. Schraefel, J. P. Hourcade, C. Appert, & D. Wigdor (Eds.), *Conference on human factors in computing systems*, 2189–2201. ACM. https://doi.org/10.1145/3025453.3025875.

Moncur, W., Masthoff, J., Reiter, E., Freer, Y., & Nguyen, H. (2014). Providing adaptive health updates across the personal social network. *Human-Computer Interaction*, **29**, 256–309. https://doi.org/10.1080/07370024.2013.819218.

Moncur, W., Gibson, L., & Herron, D. (2016). The role of digital technologies during relationship breakdowns. In D. Gergle, M. R. Morris, P. Bjørn, & J. Konstan (Eds.), *Proceedings of the ACM conference on computer supported cooperative work, CSCW*, **27**, 371–382. ACM. https://doi.org/10.1145/2818048.2819925.

Moore, A. (2008). Defining privacy. *Journal of Social Philosophy*, **39**, 411–428.

Mulvihill, K. (2021). *A self-determination theory perspective on wellbeing in the transition from university: Trait autonomy and basic psychological need satisfaction through graduates' goal pursuits, past and present* [Doctoral dissertation. Concordia University.

Naslund, J. A., & Aschbrenner, K. A. (2019). Risks to privacy with use of social media: understanding the views of social media users with serious mental illness. *Psychiatric Services*, **70**, 561–568. https://doi.org/10.1176/APPI.PS.201800520.

Ngwenya, N., Farquhar, M., & Ewing, G. (2016). Sharing bad news of a lung cancer diagnosis: Understanding through communication privacy management theory. *Psycho-Oncology*, **25**, 913–918. https://doi.org/10.1002/PON.4024.

Nicol, E., Briggs, J., Moncur, W., Htait, A., Carey, D. P., Azzopardi, L., & Schafer, B. (2022). Revealing cumulative risks in online personal information: A data narrative study. *Proceedings of the ACM on Human-Computer Interaction*, **6**, 1–25. https://doi.org/10.1145/3555214.

Obar, J. A., & Oeldorf-Hirsch, A. (2020). The biggest lie on the internet: Ignoring the privacy policies and terms of service policies of social networking services. *Information, Communication & Society*, **23**, 128–147. https://doi.org/10.1080/1369118X.2018.1486870.

Odom, W., Zimmerman, J., & Forlizzi, J. (2010). Designing for dynamic family structures: Divorced families and interactive systems. . In O. W. Bertelsen, P. Krogh, K. Halskov, & M. G. Petersen (Eds.), *DIS 2010—Proceedings of the 8th ACM conference on designing interactive systems* (pp. 151–160). ACM. https://doi.org/10.1145/1858171.1858199.

Office for National Statistics (ONS). (2021b). *Marriage and civil partnership status, England and Wales: Census 2021*. released February 22, 2023, ONS website, https://www.ons.gov.uk/

Opdenakker, M. C. (2021). Need-supportive and need-thwarting teacher behavior: Their importance to boys' and girls' academic engagement and procrastination behavior. *Frontiers in Psychology*, **12**, 628064. https://doi.org/10.3389/fpsyg.2021.628064.

Parfenova, D., Niftulaeva, A., & Carr, C. T. (2024). Words, words, words: Participants do not read consent forms in communication research. *Communication Research Reports*, **41**, 199–209. https://doi.org/10.1080/08824096.2024.2379832.

Park, Y. J. (2013). Digital literacy and privacy behavior online. *Communication Research*, **40**, 215–236. https://doi.org/10.1177/0093650211418338.

Parkinson, B., Millard, D. E., O'Hara, K., & Giordano, R. (2018). The digitally extended self: A lexicological analysis of personal data. *Journal of Information Science*, **44**, 552–565. https://doi.org/10.1177/0165551517706233.

Perlman, D., Patterson, C., Moxham, L., Taylor, E. K., Brighton, R., Sumskis, S., & Heffernan, T. (2017). Understanding the influence of resilience for people with a lived experience of mental illness: A self-determination theory perspective. *Journal of Community Psychology*, **45**, 1026–1032. https://doi.org/10.1002/jcop.21908.

Pinter, A. T., Scheuerman, M. K., & Brubaker, J. R. (2021). Entering doors, evading traps: Benefits and risks of visibility during transgender coming outs. *Proceedings of the ACM on Human Computer Interaction. CSCW 3*, 272:1–272:27. https://doi.org/10.1145/3434181.

Pötzsch, S. (2009). Privacy awareness: A means to solve the privacy paradox?. In V. Matyáš, S. Fischer-Hübner, D. Cvrček, & P. Švenda (Eds.), *The Future of Identity in the Information Society. Privacy and Identity 2008* (pp. 226–236). Springer. https://doi.org/10.1007/978-3-642-03315-5_17

Purnama, S., Ulfah, M., Machali, I., Wibowo, A., & Narmaditya, B. S. (2021). Does digital literacy influence students' online risk? Evidence from Covid-19. *Heliyon*, **7**, 1–6. https://doi.org/10.1016/j.heliyon.2021.e07406.

Rao, A., Schaub, F., Sadeh, N., Acquisti, A., & Kang, R. (2016, June 22). Expecting the unexpected: Understanding mismatched privacy expectations online. In M. E. Zurko, S. Consolvo, & M. Smith (Eds.), *SOUPS 2016—Proceedings of the 12th symposium on usable privacy and security*. ACM. https://papers.ssrn.com/abstract=4231506

Ratelle, C. F., Lascano, D. I. V., Guay, F., & Duchesne, S. (2023). Need satisfaction profiles during the transition to secondary school and its implications in later education. *Learning and Individual Differences*, **107**, 102357. https://doi.org/10.1016/j.lindif.2023.102357.

Reed-Fitzke, K., & Lucier-Greer, M. (2021). Basic psychological need satisfaction and frustration: Profiles among emerging adult college students and links to well-being. *Contemporary Family Therapy*, **43**, 20–34. https://doi.org/10.1007/s10591-020-09550-w.

Reinhardt, D., Engelmann, F., & Hollick, M. (2015,). Can I help you setting your privacy? A survey-based exploration of users' attitudes towards privacy suggestions. In L. L. Chen, M. Steinbauer, I. Khalil, & G. Anderst-Kotsis (Eds.), *Proceedings of the 13th international conference on advances in mobile computing and multimedia* (pp. 347-356). ACM https://doi.org/10.1145/2837126.2837130

Rossetto, K. R., & Owlett, J. S. (2022). Social media as an (un)supportive resource for military partners coping with military lifestyle challenges. *Armed Forces & Society*, **48**, 440–463. https://doi.org/10.1177/0095327X20974391.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, **25**, 54–67. https://doi.org/10.1006/ceps.1999.1020.

Saritepeci, M., Yildiz Durak, H., Özüdoğru, G., & Atman Uslu, N. (2024). The role of digital literacy and digital data security awareness in online privacy concerns: A multi-group analysis with gender. *Online Information Review*, **48**, 983–1001. https://doi.org/10.1108/OIR-03-2023-0122.

Sas, C., & Whittaker, S. (2013). Design for forgetting: Disposing of digital possessions after a breakup. In W. E. Mackay, S. Brewster, & S. Bødker (Eds.), *Conference on human factors in computing systems* (pp. 1823–1832). ACM. https://doi.org/10.1145/2470654.2466241.

Scheuerman, M. K., Branham, S. M., & Hamidi, F. (2018). Safe spaces and safe places. *Proceedings of the ACM on Human-Computer Interaction*, **2**, 1–27. https://doi.org/10.1145/3274424.

van der Schyff, K., Flowerday, S., & Furnell, S. (2020). Privacy risk and the use of Facebook apps: A gender-focused vulnerability assessment. *Computers & Security*, **96**, 101866. https://doi.org/10.1016/j.cose.2020.101866.

Seiler, A., & Jenewein, J. (2019). Resilience in cancer patients. *Frontiers in Psychiatry*, **10**, 409247. https://doi.org/10.3389/fpsyt.2019.00208.

Semaan, B. C., Britton, L. M., & Dosono, B. (2016). Transition resilience with ICTs: "Identity awareness" in veteran re-integration. In J. Kaye, A. Druin, C. Lampe, D. Morris, & J. P. Hourcade (Eds.), *Conference on human factors in computing systems* (pp. 2882–2894). ACM https://doi.org/10.1145/2858036.2858109.

Semaan, B.C., Britton, L.M., & Dosono B. (2017) Military masculinity and the travails of transitioning: Disclosure in social media. In C. P. Lee, S. Poltrock, L. Barkhuus, M. Borges, & W. Kellogg (Eds.), *Proceedings of the 2017 ACM Conference on computer supported cooperative work and social computing, in CSCW'17* (pp. 387–403). Association for Computing Machinery. https://doi.org/10.1145/2998181.2998221.

Silk, J. S., Morris, A. S., Kanaya, T., & Steinberg, L. (2003). Psychological control and autonomy granting: Opposite ends of a continuum or distinct constructs? *Journal of Research on Adolescence*, **13**, 113–128. https://doi.org/10.1111/1532-7795.1301004.

Solove, D. J. (2002). Conceptualizing privacy. *California Law Review*, **90**, 1087–1156.

Soumelidou, A., & Tsohou, A. (2021). Towards the creation of a profile of the information privacy aware user through a systematic literature review of information privacy awareness. *Telematics and Informatics*, **61**, 101592. https://doi.org/10.1016/j.tele.2021.101592.

Stenling, A., Henning, G., Bjälkebring, P., Tafvelin, S., Kivi, M., Johansson, B., & Lindwall, M. (2021). Basic psychological need satisfaction across the retirement transition: Changes and longitudinal associations with depressive symptoms. *Motivation and Emotion*, **45**, 75–90. https://doi.org/10.1007/s11031-020-09854-2.

Talbot, C. V., Talbot, A., Roe, D. J., & Briggs, P. (2022). The management of LGBTQ+ identities on social media: A student perspective. *New Media & Society*, **24**, 1729–1750. https://doi.org/10.1177/1461444820981009.

Torre, I., Sanchez, O. R., Koceva, F., & Adorni, G. (2018). Supporting users to take informed decisions on privacy settings of personal devices. *Personal and Ubiquitous Computing*, **22**, 345–364. https://doi.org/10.1007/s00779-017-1068-3.

Van Blarkom, G. W., Borking, J. J., & Olk, J. E. (2003). Handbook of privacy and privacy-enhancing technologies. In *Privacy Incorporated Software Agent (PISA) consortium, The Hague*, **198**, 94–103.

Van Schaik, P., & Renaud, K. (2024). PEDRO: privacy-enhancing decision suppoRt tOol. *Applied Sciences*, **14**, 2076–3417. https://doi.org/10.3390/app14209275.

Vasiou, A., Vasilaki, E., Mastrothanasis, K., & Galanaki, E. (2024). Emotional intelligence and university students' happiness: The mediating role of basic psychological needs' satisfaction. *Psychology International*, **6**, 855–867. https://doi.org/10.3390/psycholint6040055.

Vila, T., Greenstadt, R., & Molnar, D. (2003). Why we can't be bothered to read privacy policies models of privacy economics as a lemons market. In N. Sadeh, M. J. Dively, R. Kauffman, Y. Labrou, O. Shehory, O. Shehory, R. Telang, & L. Cranor (Eds.), *Proceedings of the 5th international conference on electronic commerce* (pp. 403-407). ACM. https://doi.org/10.1145/948005.948057

Vitak, J., & Kim, J. (2014). "You can't block people offline": Examining how Facebook's affordances shape the disclosure process. In S. Fussell, W. Lutters, M. R. Morris, & M. Reddy (Eds.), *Proceedings of the ACM conference on computer supported cooperative work, CSCW* (pp. 461–474). ACM. https://doi.org/10.1145/2531602.2531672.

Wang, L. H., & Metzger, M. J. (2024). The online privacy divide: Testing resource and identity explanations for racial/ethnic differences in privacy concerns and privacy management behaviors on social media. *Communication Research*, **00936502241273157**. https://doi.org/10.1177/00936502241273157.

Wilson, S. R., Hintz, E. A., MacDermid Wadsworth, S. M., Topp, D. B., Southwell, K. H., & Spoont, M. (2021). Female U.S. military veterans' (non)disclosure of mental health issues with family and friends: Privacy rules and boundary management. *Health Communication*, **36**, 412–423. https://doi.org/10.1080/10410236.2019.1693128.

Xia, N., Song, H. H., Liao, Y., Iliofotou, M., Nucci, A., Zhang, Z. L., & Kuzmanovic, A. (2013). Mosaic: Quantifying privacy leakage in mobile networks. *ACM SIGCOMM Computer Communication Review*, **43**, 279–290. https://doi.org/10.1145/2534169.2486008.

Zhang, B.Z., Haimson, O.L., Dye M. (2018). The Chinese diaspora: Overlapping life transitions, barriers, and HCI. In G. Mark, S. Fussell, C. Lampe, M. C. Schraefel, J. P. Hourcade, C. Appert, & D. Wigdor (Eds.), *Proceedings of ACM conference (Conference'17)* (p. 5). ACM. https://doi.org/10.1145/1122445.1122456

Zhao, S., Grasmuck, S., & Martin, J. (2008). Identity construction on Facebook: Digital empowerment in anchored relationships. *Computers in Human Behavior*, **24**, 1816–1836. https://doi.org/10.1016/j.chb.2008.02.012.

Zheleva, E., Terzi, E., & Getoor, L. (2012). *Privacy in social networks* (Vol. **4**). Morgan & Claypool Publishers.

Zhou, W., & Piramuthu, S. (2014). Security/privacy of wearable fitness tracking IoT devices. In Rocha, A., Fonseca, D., Redondo, E., Reis, L.P., & Cota, M.P. (Eds.) *9th Iberian conference on information systems and technologies (CISTI)* (pp. 1–5). IEEE. https://doi.org/10.1109/CISTI.2014.6877073

Appendix

Table A1 Demographic description of survey respondents.

	Full sample (*n* = 398)	Relationship Breakdown (*n* = 118)	Armed Forces (*n* = 91)	Serious Illness (*n* = 100)	LGBTQ+ (*n* = 89)
Gender					
Male	167 (42.0%)	27 (22.9%)	81 (89.0%)	37 (37.0%)	22 (24.7%)
Female	218 (54.8%)	89 (75.4%)	10 (11.0%)	63 (63.0%)	56 (62.9%)
Self-described	13 (3.3%)	2 (1.7%)			11 (12.4%)
Age (years)					
M (*SD*)	40.0 (14.3)	36.5 (10.6)	39.4 (11.9)	54.2 (13.3)	29.5 (8.5)
Relationship status					
Married/long-term relationship	189 (47.5%)	36 (30.5%)	57 (62.6%)	66 (66.0%)	30 (33.7%)
In a relationship but living apart	50 (12.6%)	20 (16.9%)	9 (9.9%)	5 (5.0%)	16 (18.0%)
Cohabiting	45 (11.3%)	21 (17.8%)	8 (8.8%)	4 (4.0%)	12 (13.5%)
Single	80 (20.1%)	29 (24.6%)	13 (14.3%)	9 (9.0%)	29 (32.6%)
Divorced	22 (5.5%)	10 (8.5%)	3 (3.3%)	8 (8.0%)	1 (1.1%)
Widowed	9 (2.3%)			8 (8.0%)	1 (1.1%)
Prefer not to say	3 (.8%)	2 (1.7%)	1 (1.2%)		
Employment status					
Full time	204 (51.3%)	63 (53.4%)	64 (70.3%)	34 (34.0%)	54 (48.3%)
Part time	40 (10.1%)	14 (11.9%)	3 (3.3%)	14 (14.0%)	9 (10.1%)
Self-employed	38 (9.5%)	15 (12.7%)	5 (5.5%)	10 (10.0%)	8 (9.0%)
Unemployed and unavailable for work	19 (4.8%)	13 (2.5%)	6 (6.6%)	2 (2.0%)	8 (9.0%)
Temporarily off work due to illness/disability	6 (1.5%)	1 (.8%)	1 (1.1%)	2 (2.0%)	2 (2.2%)
Permanently off work due to illness/disability	20 (5.0%)	6 (5.1%)	1 (1.1%)	10 (10.0%)	3 (3.4%)
Retired	31 (7.8%)	3 (2.5%)	5 (5.5%)	23 (23.0%)	
Looking after the home	10 (2.5%)	5 (4.2%)		4 (4.0%)	1 (1.1%)
Full-time education	20 (5.0%)	5 (4.2%)	3 (3.3%)	1 (1.0%)	11 (12.4%)
Full-time carer	6 (1.5%)	2 (1.7%)	3 (3.3%)		1.1 (3.4%)
Other 4 (1.0%)	1 (.8%)			3 (3.4%)	
Highest qualification					
GCSE or equivalent	44 (11.1%)	11 (9.3%)	11 (12.1%)	15 (15.0%)	7 (7.9%)
High school graduate diploma or equivalent[a]	1 (0.3%)				1 (1.1%)
A levels of equivalent	97 (24.4%)	33 (28.0%)	23 (25.3%)	20 (20.0%)	21 (23.6%)
College credit, no degree[a]	10 (2.5%)		9 (9.9%)	1 (1.0%)	
Trade/technical/vocational training[a]	5 (1.3%)		5 (5.5%)		
Undergraduate degree	167 (41.7%)	49 (41.5%)	30 (33.0%)	45 (45.0%)	43 (48.3%)
Postgraduate degree	73 (18.4%)	24 (20.3%)	13 (14.3%)	19 (19.0%)	17 (19.1%)
Prefer not to say	1 (0.3%)	1 (0.8%)			
Religious belief					
Yes	62 (15.6%)	13 (11.0%)	17 (18.7%)	22 (22.0%)	10 (11.2%)
No	297 (74.6%)	92 (78.0%)	67 (73.6%)	68 (68.0%)	70 (78.7%)
Unsure	39 (9.8%)	13 (11.0%)	7 (7.7%)	10 (1.0%)	9 (10.1%)
Spiritual belief					
Yes	165 (41.5%)	49 (41.5%)	37 (40.7%)	44 (44.0%)	35 (39.3%)
No	174 (43.7%)	45 (38.1%)	47 (51.6%)	44 (44.0%)	38 (42.7%)
Unsure	57 (14.3%)	23 (19.5%)	6 (6.6%)	12 (12.0%)	16 (18.0%)
Prefer not to say	2 (0.5%)	1 (0.8%)	1 (1.1%)		
Transgender					
Yes	14 (3.5%)	1 (0.8%)	2 (2.2%)	1 (1.0%)	10 (11.2%)
No	381 (95.7%)	116 (98.3%)	89 (97.8%)	99 (99.0%)	77 (86.5%)
Prefer not to say	3 (0.8%)	1 (0.8%)			2 (2.2%)
Sexual orientation					
Heterosexual/straight	264 (66.3%)	89 (75.4%)	84 (92.3%)	91 (91.0%)	
Gay or lesbian	44 (11.1%)	7 (5.9%)	1 (1.1%)	3 (3.0%)	33 (37.1%)
Bisexual	72 (18.1%)	18 (15.3%)	5 (5.5%)	5 (5.0%)	44 (49.4%)
Other	14 (3.5%)	2 (1.7%)			12 (13.5%)
Prefer not to say	4 (1.0%)	2 (1.7%)	1 (1.1%)	1 (1.0%)	

(Continued in Appendix)

© The Author(s) 2026. Published by Oxford University Press on behalf of The British Computer Society. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted reuse, distribution, and reproduction in any medium, provided the original work is properly cited.
Interacting with Computers, 2026, **38**, 671–696
https://doi.org/10.1093/iwc/iwag002
Article

Table A1 Continued

		Full sample (*n* = 398)	Relationship Breakdown (*n* = 118)	Armed Forces (*n* = 91)	Serious Illness (*n* = 100)	LGBTQ+ (*n* = 89)
Ethnicity						
	White: English, Welsh, Scottish, Northern Irish, British	303 (76.1%)	97 (82.2%)	52 (57.1)	82 (82.0%)	72 (80.9%)
	White: Irish	5 (1.3%)	2 (1.7%)	1 (1.1%)	1 (1.0%)	1 (1.1%)
	White: American[a]	28 (7.050%)	1 (.8%)	25 (27.55%)		2 (2.2%)
	White: Other	23 (5.8%)	9 (7.6%)	1 (1.1%)	7 (7.0%)	6 (6.7%)
	Mixed: White and Black Caribbean	2 (0.5%)		1 (1.1%)	1 (1.0%)	
	Mixed: White and Asian	4 (1.0%)	2 (1.7%)	1 (1.1%)		1 (1.1%)
	Mixed: Other	1 (0.3%)		1 (1.1%)		
	Asian/Asian British: Indian	10 (2.4%)	2 (1.7%)		3 (3.0%)	5 (5.6%)
	Asian/Asian British: Pakistani	2 (0.5%)				2 (2.2%)
	Asian/Asian British: Bangladeshi	5 (1.3%)	3 (2.5%)		2 (2.0%)	
	Asian/Asian British: Chinese	1 (0.3%)			1 (1.0%)	
	Asian: Other	1 (0.3%)			1 (1.0%)	
	Asian/Pacific Islander[a]	1 (0.3%)		1 (1.1%)		
	Black/Black British: African	2 (0.5%)		1 (1.1%)	1 (1.0%)	
	Black/Black British: Caribbean	3 (0.8%)	1 (0.8%)	2 (2.2%)		
	Black or African American[a]	1 (0.3%)		1 (1.1%)		
	Arab	1 (0.3%)				
	Hispanic or Latino[a]	2 (0.5%)		1 (1.1%)	1 (1.1%)	
	Multiracial or biracial	3 (0.8%)		3 (3.3%)		

[a] U.S. participants only.

Table A2 Features of the life transition.

		Full sample (*n* = 398)	Relationship Breakdown (*n* = 118)	Armed Forces (*n* = 91)	Serious Illness (*n* = 100)	LGBTQ+ (*n* = 89)
When did the transition start?						
	Within the last month	4 (1.0%)	2 (1.7%)	1 (1.1%)		1 (1.1%)
	2–6 months ago	16 (4.0%)	10 (8.5%)	6 (6.6%)		
	6–12 months ago	34 (8.5%)	15 (12.7%)	6 (6.6%)	4 (4.0%)	9 (10.1%)
	12–18 months ago	42 (10.6%)	9 (7.6%)	6 (6.6%)	9 (9.0%)	18 (20.2%)
	18 months to 5 years ago	253 (63.6%)	80 (67.8%)	45 (45.1%)	76 (76.0%)	56 (62.9%)
	Over 5 years ago	49 (12.3%)	2 (1.7%)	31 (34.1%)	11 (11.0%)	5 (5.6%)
Do you consider yourself to still be going through this transition today?						
	Yes	216 (54.3%)	56 (47.5%)	40 (44.4%)	60 (60.%)	60 (67.4%)
	No	182 (45.7%)	62 (52.5%)	51 (56.0%)	40 (40.0%)	29 (32.6%)
Percentage of respondents who had experienced other/multiple life transitions						
	Relationship breakdowns		59 (50.0%)	45 (49.5%)	40 (40.0%)	59 (66.3%)
	Leaving the Armed Forces		4 (3.4%)	46 (50.5%)	3 (3.0%)	3 (3.4%)
	Serious illness		20 (16.9%)	9 (9.9%)	35 (35.0%)	20 (22.5%)
	LGBTQ+ transition		12 (10.2%)	3 (3.3%)	2 (2.0%)	32 (36.0%)
When did those other transition(s) occur?						
	At the same time		38 (32.2%)	31 (34.1%)	22 (22.0%)	26 (29.2%)
	Before the main life transition		23 (19.5%)	17 (18.7%)	31 (31.0%)	32 (36.0%)
	After the main life transition		15 (12.7%)	22 (24.2%)	7 (7.0%)	13 (14.6%)
	Missing		42 (35.6%)	21 (23.1%)	40 (40.0%)	18 (20.2%)
Did you access support services during your transition?						
	Yes	177 (44.5%)	45 (38.1%)	28 (30.8%)	78 (78.0%)	26 (29.2%)
	No	218 (54.8%)	70 (59.3%)	63 (69.2%)	22 (22.0%)	63 (70.8%)
	Other	3 (0.8%)	3 (2.5%)			
Satisfaction with support received (scale 1–5, with high responses indicating most satisfied)						
	M (*SD*)	3.54 (1.35)	3.12 (1.28)	3.63 (1.33)	3.80 (1.37)	3.38 (1.3)

Table A3 Online privacy during life transition.

	Full sample (*n* = 398)	Relationship Breakdown (*n* = 118)	Armed Forces (*n* = 91)	Serious Illness (*n* = 100)	LGBTQ+ (*n* = 89)
Did you share information about your transition online?					
Yes, but I deleted it	29 (7.3%)	10 (8.5%)	5 (5.5%)	6 (6.0%)	8 (9.0%)
Yes, anonymously	73 (18.3%)	16 (13.6%)	8 (8.8%)	24 (24.0%)	25 (28.1%)
No, but I spoke to others online	206 (51.8%)	67 (56.8%)	54 (59.3%)	44 (44.0%)	41 (46.1%)
Other	90 (22.6%)	25 (21.2%)	24 (26.4%)	26 (26.0%)	15(916.9%)
Did people find out about your transition online who you would not choose to tell face-to-face?					
Yes	107 (26.9%)	40 (33.9%)	21 (23.1%)	17 (17.0%)	29 (32.6%)
No	196 (49.2%)	44 (37.3%)	52 (57.1%)	52 (52.0%)	48 (53.9%)
Missing	95 (23.9%)	34 (28.8%)	18 (19.8%)	31 (31.0%)	12 (13.5%)
Did these people find out from you or from someone else?					
Me	81 (20.4)	28 (23.7%)	15 (16.5%)	19 (19.0%)	19 (21.3%)
Someone else	53 (13.3)	23 (19.5%)	5 (5.5%)	13 (13.0%)	12 (13.5%)
I don't know	79 (19.8)	30 (25.4%)	18 (19.8%)	20 (20.0%)	11 (12.4%)
Some other way	8 (2.0%)	2 (1.7%)	1 (1.1%)	2 (2.0%)	3 (3.4%)
Through which platforms did people find out about your transition?					
Facebook	102 (25.6%)	33 (28.0%)	23 (25.3%)	23 (23.0%)	23 (25.8%)
Instagram	38 (9.5%)	12 (10.2%)	3 (3.3%)	5 (5.0%)	18 (20.2%)
Snapchat	11 (2.8%)	5 (4.2%)	2 (2.2%)		4 (4.5%)
Twitter	13 (3.3%)	3 (2.5%)	4 (4.4%)	2 (2.0%)	4 (4.5%)
Other	32 (8.0%)	10 (8.5%)	8 (8.8%)	6 (6.0%)	8 (9.0%)
How distressed were you about others finding out from social media (scale 1–5, with high responses indicating most distress)					
M (*SD*)	2.39 (1.19)	2.51 (1.17)	2.03 (1.20)	2.04 (1.05)	2.93 (1.15)
How much control did you feel that you had over news of your transition being shared online (scale 1–5, with high responses indicated most control)					
M (*SD*)	3.76 (1.26)	3.59 (1.34)	3.75 (1.34)	3.85 (1.25)	3.89 (1.07)

Table A4 Online harms experienced.

	Full sample (*n* = 398)	Relationship Breakdown (*n* = 118)	Armed Forces (*n* = 91)	Serious Illness (*n* = 100)	LGBTQ+ (*n* = 89)
Disinformation or misinformation					
Yes	100 (25.1%)	35 (29.7%)	17 (18.7%)	19 (19.0%)	29 (32.6%)
No	266 (66.8%)	69 (58.5%)	67 (73.6%)	75 (75.0%)	55 (61.8%)
Not sure	32 (8.0%)	14 (11.9%)	7 (7.7%)	6 (6.0%)	5 (5.6%)
Unwelcome content					
Yes	48 (12.1%)	16 (13.6%)	7 (7.7%)	6 (6.0%)	19 (21.3%)
No	324 (81.4%)	94 (79.7%)	79 (86.8%)	89 (89.0%)	62 (69.7%)
Not sure	26 (6.5%)	6 (6.8%)	5 (5.5%)	5 (5.0%)	8 (9.0%)
Cyberbullying and trolling					
Yes	39 (9.8%)	11 (9.3%)	3 (3.3%)	1 (1.0%)	24 (27.0%)
No	355 (89.2%)	106 (89.8%)	87 (95.6%)	99 (99.0%)	63 (70.8%)
Not sure	4 (1.0%)	1 (0.8%)	1 (1.1%)		2 (2.2%)
Unwelcome broadcasting of your content					
Yes	31 (7.8%)	12 (10.2%)	6 (6.6%)	7 (7.0%)	6 (6.7%)
No	347 (87.2%)	97 (82.2%)	78 (85.7%)	91 (91.0%)	81 (91.0%)
Not sure	20 (5.0%)	9 (7.6%)	7 (7.7%)	2 (2.0%)	2 (2.2%)
Harassment and cyberstalking					
Yes	29 (7.3%)	13 (11.0%)	4 (4.4%)		12 (13.5%)
No	363 (91.2%)	103 (87.3%)	85 (93.4%)	100 (100%)	75 (84.3%)
Not sure	6 (1.5%)	2 (1.7%)	2 (2.2%)		2 (2.2%)
Advertising/sale of illegal goods or services					
Yes	29 (7.3%)	3 (2.5%)	10 (11.0%)	10 (10.0%)	6 (6.7%)
No	362 (91.0%)	113 (95.8%)	80 (87.9%)	86 (86.0%)	83 (93.3%)
Not sure	7 (1.8%)	2 (1.7%)	1 (1.1%)	4 (4.0%)	
Financial fraud					
Yes	18 (4.5%)	5 (4.2%)	9 (9.9%)	2 (2.0%)	2 (2.2%)
No	379 (95.2%)	113 (95.8%)	81 (89.0%)	98 (98.0%)	87 (97.8%)
Not sure	1 (0.3%)	2 (1.7%)	1 (1.1%)		
Hacking					
Yes	16 (4.0%)	5 (4.2%)	4 (4.4%)	2 (2.0%)	5 (5.6%)
No	379 (95.2%)	112 (94.9%)	85 (93.4%)	98 (98.0%)	84 (94.4%)
Not sure	3 (0.8%)	1 (0.8%)	2 (2.2%)		
Identity theft					
Yes	9 (2.3%)	1 (0.8%)	4 (4.4%)	1 (1.0%)	3 (3.4%)
No	386 (97.0%)	116 (98.3%)	86 (94.5%)	99 (99.0%)	85 (95.5%)
Not sure	3 (0.8%)	1 (0.8%)	1 (1.1%)		1 (1.1%)

Table A5 Confidence with technology.

	Full sample (*n* = 398)	Relationship Breakdown (*n* = 118)	Armed Forces (*n* = 91)	Serious Illness (*n* = 100)	LGBTQ+ (*n* = 89)
Blog	4.30 (0.91)	4.21 (0.89)	4.33 (0.92)	4.24 (0.99)	4.44 (0.83)
Preference settings	4.20 (0.88)	4.14 (0.81)	4.38 (0.84)	3.93 (1.05)	4.37 (0.73)
Advanced search	4.03 (0.99)	3.82 (0.98)	4.22 (0.94)	3.90 (1.04)	4.27 (0.90)
Tagging	4.07 (1.15)	4.29 (0.94)	4.11 (1.21)	3.53 (1.30)	4.35 (0.98)
Phishing	3.96 (1.08)	3.70 (1.22)	4.34 (0.85)	3.84 (1.04)	4.08 (1.05)
Spyware	3.38 (1.24)	3.10 (1.28)	3.82 (1.15)	3.43 (1.16)	3.27 (1.27)
Proxypod (false item)	1.22 (0.58)	1.21 (0.57)	1.30 (0.69)	1.13 (0.44)	1.25 (0.59)
Overall mean	3.99 (0.74)	3.88 (0.69)	4.20 (0.67)	3.81 (0.81)	4.13 (0.71)

Table A6 Psychometric scales.

	Full sample (*n* = 398)	Relationship Breakdown (*n* = 118)	Armed Forces (*n* = 91)	Serious Illness (*n* = 100)	LGBTQ+ (*n* = 89)	*F*	*p*
Affinity with technology	3.67 (1.03)	3.46 (0.99)	4.05 (0.99)	3.62 (1.01)	3.64 (1.08)	6.00	<.001
Privacy orientation							
Privacy as a right	4.40 (0.54)	4.36 (0.50)	4.45 (0.58)	4.34 (0.57)	4.47 (0.54)	1.32	.266
Concerns for own privacy	3.53 (0.85)	3.70 (0.83)	3.54 (0.84)	3.27 (0.78)	3.57 (0.89)	5.08	.002
Other contingent privacy	3.56 (.78)	3.60 (0.71)	3.70 (0.83)	3.55 (0.75)	3.40 (0.83)	2.38	.069
Privacy of others	4.28 (0.54)	4.14 (0.55)	4.38 (0.47)	4.30(.49)	4.34 (0.60)	4.28	.005
Self-determination theory							
Autonomy satisfaction	3.50 (0.95)	3.26 (0.99)	3.79 (0.97)	3.34 (0.95)	3.72 (0.73)	8.37	<.001
Autonomy frustration	2.65 (1.05)	2.81 (1.04)	2.66 (0.99)	2.72 (1.10)	2.34 (1.02)	3.80	.011
Relatedness satisfaction	3.60 (1.04)	3.19 (1.04)	3.59 (1.02)	4.05 (0.90)	3.64 (1.03)	13.28	<.001
Relatedness frustration	2.18 (1.12)	2.52 (1.24)	2.07 (1.01)	1.76(.91)	2.31 (1.15)	9.43	<.001
Competence satisfaction	3.16 (1.07)	2.85 (1.07)	3.53 (1.17)	3.17(.99)	3.19 (0.94)	7.36	<.001
Competence Frustration	2.99 (1.31)	3.16 (1.31)	2.84 (1.42)	3.00 (1.30)	2.92 (1.20)	1.18	.319
Psychological flexibility							
Openness	2.52 (1.29)	2.31 (1.22)	2.88 (1.37)	2.82 (1.25)	2.08 (1.16)	9.30	<.001
Awareness	3.32 (1.47)	3.13 (1.55)	3.48 (1.51)	3.60 (1.41)	3.10 (1.33)	2.96	.032
Valued action	4.68 (0.86)	4.52 (0.87)	4.77 (0.95)	4.88 (0.67)	4.57 (0.88)	4.20	.006
Overall psychological Flexibility	3.53 (0.92)	3.34 (0.93)	3.74 (0.94)	3.79 (0.86)	3.27 (0.85)	8.73	<.001
Resilience	2.56 (0.60)	2.43 (0.61)	2.81 (0.58)	2.62 (0.56)	2.39 (0.56)	10.59	<.001

Table A7 The descriptive and correlations between variables.

Variable	*N*	Mean	*SD*	Min	Max	Correlation																
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1 Distress	202	2.39	1.19	1.00	5.00																			
2 Sense of control	398	3.76	1.26	1.00	5.00	−.17*																		
3 Digital literacy	398	3.99	.74	1.50	5.00	−.06	.12*																	
4 Affinity with technology	398	3.67	1.03	1.11	5.89	.02	−.05	.39***																
5 Privacy orientation-Privacy as a right	398	4.40	.54	2.67	5.00	.12	.01	.23***	.18***															
6 Privacy orientation-Concerns for own privacy	398	3.53	.85	1.00	5.00	.31***	−.15**	.11*	.05	.32***														
7 Privacy orientation-Other contingent privacy	398	3.56	.78	1.25	5.00	.06	−.05	.14**	.00	.24***	.38***													
8 Privacy orientation-Privacy of others	398	4.28	.54	2.20	5.00	.11	−.07	.24***	.23***	.37***	.25***	.32***												
9 Autonomy satisfaction	398	3.50	.95	1.00	5.00	−.29***	.22***	.09	.02	.05	−.14**	.05	.13*											
10 Autonomy frustration	398	2.65	1.05	1.00	5.00	.25***	−.15**	.03	.01	.01	.17***	.04	.00	−.45										
11 Relatedness satisfaction	398	3.60	1.04	1.00	5.00	−.25***	.20***	−.03	.04	.05	−.27***	.02	.13*	.50***	−.38**									
12 Relatedness frustration	398	2.18	1.12	1.00	5.00	.35***	−.19***	.09	.05	.07	.26***	.09	−.05	−.37***	.41***	−.58***								
13 Competence satisfaction	398	3.16	1.07	1.00	5.00	−.24***	.19***	.09	−.01	.05	−.17***	.12*	.12*	.63***	−.42***	.55***	−.40***							
14 Competence frustration	398	2.99	1.31	1.00	5.00	.34***	−.16***	−.01	.07	.06	.19***	.02	−.02	−.41***	.46***	−.35***	.41***	−.55**						
15 Psychological flexibility-Openness	398	2.52	1.29	.00	6.00	−.33***	.09	.02	−.02	−.13**	−.30***	−.07	−.04	.21***	−.28***	.22***	−.30***	.27***	−.33					
16 Psychological flexibility-Awareness	398	3.32	1.47	.00	6.00	−.12	.11*	.06	.04	−.03	−.14***	.03	.12*	.11*	−.11*	.13**	−.21***	.15**	−.26	.53***				
17 Psychological flexibility-Valued action	398	4.68	.86	1.33	6.00	−.23***	.03	.12*	.13*	.22***	.03	.20***	.27***	.26***	−.14**	.33***	−.23***	.29***	−.18***	.31***	.38***			
18 Overall psychological flexibility	398	3.53	.92	1.00	5.88	−.30***	.10*	.08	.05	−.01	−.20***	.04	.12*	.24***	−.24***	.29***	−.32***	.30***	−.34***	.85***	.81***	.66***		
19 Resilience	398	2.56	.60	.56	4.00	−.19**	.11*	.13**	.12*	.06	−.07	.17***	.14***	.33***	−.21***	.32***	−.24***	.41***	−.29***	.41***	.30***	.53***	.52***	

*$p < .05$.
**$p < .01$.
***$p < .001$.

Table A8 The predictors of self-determination constructs in total sample. Bold values indicate a significant effect at $p < 0.05$.

Independent variables	Dependent variables: Self-determination construct											
	Autonomy satisfaction		Autonomy frustration		Relatedness satisfaction		Relatedness frustration		Competence satisfaction		Competence frustration	
	B	*p*	*B*	*p*	*B*	*p*	*B*	*p*	*B*	*p*	*B*	*p*
User demographic profile												
Age	**.01**	.038	**−.01**	.044	.01	.070	.00	.473	.01	.214	−.01	.229
Gender (1 = Male, 0 = Otherwise)	.04	.708	.16	.195	−.07	.535	.12	.353	.12	.326	−.01	.969
Marital status (1 = Married/long-term relationship, 0 = Otherwise)	−.06	.561	.04	.687	−.06	.549	.01	.919	−.07	.537	−.18	.175
Employment status (1 = Full time, 0 = Otherwise)	.17	.071	−.14	.191	.10	.302	.03	.816	.18	.091	**−.29**	.031
Education (1 = Undergraduate and above, 0 = Below undergraduate)	−.03	.730	.08	.423	.06	.573	.01	.907	.08	.455	.03	.797
Religious belief (1 = Yes, 0 = Otherwise)	−.22	.101	.17	.275	−.12	.425	.08	.597	−.01	.966	.12	.543
Spiritual beliefs (1 = Yes, 0 = Otherwise)	.05	.601	.06	.570	.06	.586	.10	.407	−.13	.239	.05	.728
Transgender (1 = Yes, 0 = Otherwise)	**.60**	.019	−.41	.160	.40	.136	−.54	.068	−.03	.918	−.47	.192
Sexual orientation (1 = Heterosexual/straight, 0 = Otherwise)	−.06	.690	.23	.172	−.26	.106	.12	.492	.02	.907	−.29	.179
Ethnicity (1 = White: English, Welsh, Scottish, Northern Irish, British, 0 = Otherwise)	−.19	.085	.10	.440	.01	.944	−.05	.700	−.24	.058	.09	.559
Characteristics of life transition including cybersecurity aspects												
Access support services (1 = Yes, 0 = Otherwise)	−.18	.068	**.34**	.003	−.18	.100	**.25**	.029	−.19	.095	.23	.103
Transition online share (1 = Yes, but I deleted it/Yes, anonymously, 0 = Otherwise)	−.10	.339	.02	.859	−.15	.167	.15	.223	.03	.796	.17	.242
Transition complexity (1 = experience more than 1 type of transition, 0 = experience 1 type of transition)	−.03	.732	.13	.227	−.05	.640	**.23**	.035	−.17	.117	.20	.129
Sense of control over transition being shared online	**.15**	.000	**−.09**	.027	**.11**	.005	**−.11**	.012	**.14**	.001	**−.12**	.026
Transition type												
Military leave (1) vs. Relationship breakdown (0)	.31	.051	−.04	.819	.30	.070	**−.45**	.014	**.39**	.028	.14	.529
Serious illness (1) vs. Relationship breakdown (0)	−.04	.771	−.02	.901	**.70**	.000	**−.60**	.001	.19	.271	.18	.388
LGBT+ transition (1) vs. Relationship breakdown (0)	**.41**	.015	**−.53**	.006	.33	.063	−.37	.057	**.42**	.027	**−.62**	.009
Transition duration												
Transition completed under 1 year (1) vs. Still going through life transition (0)	.09	.753	−.19	.544	.26	.392	−.05	.887	.14	.658	.06	.873
Transition completed between 1 and 5 years (1) vs. Still going through life transition (0)	.10	.302	−.18	.099	−.01	.889	−.07	.508	−.06	.587	.10	.464
Transition completed above 1 year vs. Still going through life transition (0)	.05	.775	−.11	.596	−.02	.901	−.01	.977	−.13	.552	−.18	.495
Online harms experienced												
Identity theft (1 = Yes, 0 = Otherwise)	−.08	.774	−.09	.786	−.55	.081	−.04	.912	.08	.814	.35	.394
Disinformation and misinformation (1 = Yes, 0 = Otherwise)	.00	.981	.00	.975	−.21	.082	.04	.788	.00	.998	.14	.391
Cyberbullying and trolling (1 = Yes, 0 = Otherwise)	.16	.381	.15	.465	.04	.842	**.64**	.003	.25	.242	.19	.459
Harassment and cyberstalking (1 = Yes, 0 = Otherwise)	.11	.574	.21	.351	.04	.870	.39	.097	.05	.837	.21	.457
Unwelcome content (1 = Yes, 0 = Otherwise)	−.13	.390	.23	.175	−.23	.143	.27	.116	−.25	.144	.06	.780
Advertising sale of illegal goods services (1 = Yes, 0 = Otherwise)	−.30	.089	**.48**	.015	**−.53**	.005	.36	.071	−.28	.158	.07	.767
Financial fraud (1 = Yes, 0 = Otherwise)	**−.62**	.007	−.19	.456	−.30	.228	**.65**	.015	−.40	.130	**.82**	.012
Unwelcome broadcasting of your content (1 = Yes, 0 = Otherwise)	−.24	.180	.03	.863	−.36	.058	.09	.669	.12	.553	.16	.530
Hacking (1 = Yes, 0 = Otherwise)	.27	.272	.35	.209	.43	.102	−.07	.812	.25	.367	−.08	.827
User technology profile												
Digital literacy	−.05	.494	.14	.075	**−.17**	.022	**.18**	.019	−.01	.859	.08	.412
Affinity with technology	−.01	.803	−.05	.392	.08	.116	.01	.916	−.09	.103	.08	.244
User psychology profile												
Resilience	**.33**	.000	**−.23**	.032	**.32**	.001	−.19	.074	**.53**	.000	**−.43**	.001
Psychological flexibility												
Openness to experience	.06	.153	**−.20**	.000	.06	.239	−.08	.107	.07	.172	**−.14**	.024
Behavior awareness	−.07	.066	.07	.083	−.07	.066	−.02	.634	−.04	.368	−.07	.153
Valued Action	**.17**	.009	−.06	.393	**.26**	.000	**−.16**	.028	**.15**	.041	.01	.951

Note. $N = 398$.