Saturation, acceleration, and information pathologies: The conditions that influence the emergence of information literacy safeguarding practice in COVID-19-environments.

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Saturation, acceleration, and information pathologies: The conditions that influence the emergence of information literacy safeguarding practice in COVID-19-environments.

Professor Annemaree Lloyd, Department of Information Studies University College London

Dr Alison Hicks, Department of Information Studies University College London

Abstract

- **Purpose**: The purpose of this second study into information literacy practice during the COVID-19 pandemic is to identify the conditions that influence the emergence of information literacy as a safeguarding practice.
- **Design/methodology/approach:** The qualitative research design comprised one to one in-depth interviews conducted virtually during the UK's second and third lockdown phase between November 2020-February 2021. Data were coded and analysed by the researchers using constant comparative techniques.
- **Findings:** Continual exposure to information creates the 'noisy' conditions that lead to saturation and the potential for 'information pathologies' to act as a form of resistance. Participants alter their information practices by actively avoiding and resisting formal and informal sources of information. These reactive activities have implications for standard information literacy empowerment discourses.
- **Originality:** This paper develops research into the role of information literacy practice in times of crises and extends understanding related to the concept of empowerment, which forms a central idea within information literacy discourse.
- **Research limitations/implications**: The paper is limited to the UK context.
- **Social implications:** This paper contributes to our understandings of the role that information literacy practices play within ongoing and long-term crises.
- **Practical implications:** Findings will be useful for librarians and researchers who are interested in the theorisation of information literacy as well as public health and information professionals tasked with designing long-term health promotion strategies.

Keywords: information literacy; COVID-19, saturation, information avoidance, resistance

Introduction

This paper reports on Phase Two of the multiphase study titled *Risk and Resilience* (Lloyd and Hicks, 2021). This phase of the research picks up from recent research and examines the longer-term implications of operating in crisis mode as the UK returned to lockdown conditions in November 2020 (Lockdown 2) and January-April 2021 (Lockdown 3). The unabating nature of this crisis represents an opportunity to explore how practices, which are generally characterised as stable and routine, unfold and evolve to accommodate fluid times of uncertainty. It also forms an opportunity to examine transition in greater detail, including how it is enabled and constrained during ongoing crisis situations. Overall, we are interested

in understanding what comes into view in relation to information literacy practice, which we define as a social practice that is enacted in a social setting and composed of a suite of activities and skills that reference structured and embodied knowledges and ways of knowing relevant to context (Lloyd, 2010; 2017; Lloyd and Hicks, 2021).

This phase of the research, which ran from November 2020 through February 2021 and is still ongoing, also permits a more detailed interrogation of the theme of safeguarding, which formed the overarching theme of our first study. In particular, the transitional space between the intensification and maintaining phases (Figure 1) of the safeguarding practice became the focus of attention because the information strategies being reported in this phase appeared to represent "pathologies" (Bawden and Robinson, 2009) that have potential relevance to information literacy practice. Centred on desensitisation and saturation, these strategies stood out because of the marked shift in emphasis from the proactive mediation and documentation of the intensification phase. They also attracted our attention because they led us to consider the reactive elements of information literacy practice, or how people act in response to rather than in preparation for the conditions that create the practice. The typical focus of information literacy research and practice on proactive, anticipatory activities means that reactive elements have often previously been associated with deficit and an unwillingness to become informed (Hicks & Sinkinson, 2021).

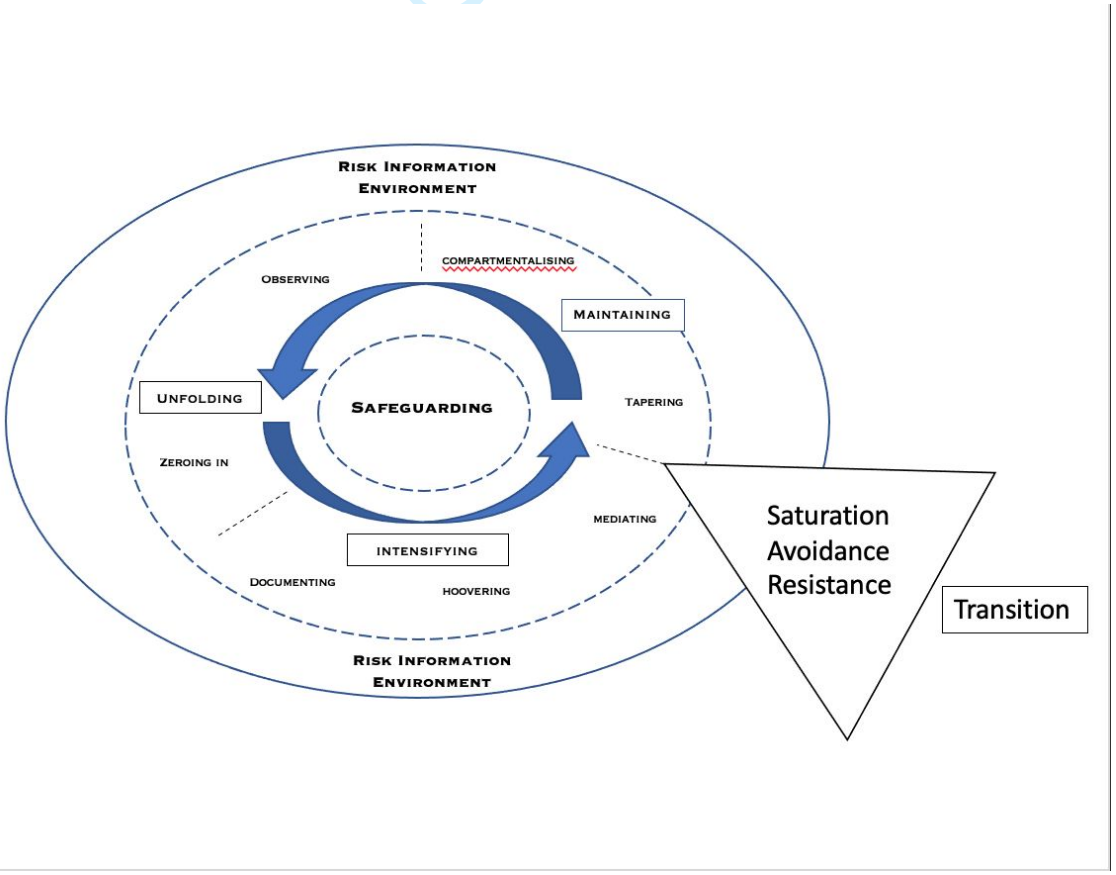

Figure 1: The transitional space between intensification and maintenance (Lloyd and Hicks 2021)

In general terms, a crisis represents a spatial and temporal point in an intense, difficult, or dangerous event. The event that initiates the crisis (for example, a terror attack, fire, flood, earthquake) is generally short in terms of time but may have long term consequences in term of recovery. In contrast, the COVID-19 pandemic continues to be an ongoing global crisis event with broad and yet to be understood social, economic and health implications. This makes it different from other crises, both in terms of the information that flows outward from authorities and in terms of the information practices that people employ to deal with the high levels of complex information that is being disseminated via a wide range of sources and across multiple social and technological platforms.

Context: Previous study

Phase One of the risk and resilience study (Lloyd and Hicks, 2021) was guided by the question: What has informed the UK public's understanding about the COVID-19 pandemic and what information practices and literacies of information came into view during the early days of the pandemic and the subsequent countrywide lockdown? During this study, we were interested in understanding the ways in which information literacy practice was constructed and enacted in relation to the unfolding crisis; how participants drew from locally nuanced ways of knowing to break down the information challenges related to understanding risk.

The central theme emerging from the Phase One analysis was the concept of safeguarding against risk. This theme referenced the overarching form and purpose of information literacy practice in the developing lockdown situation. Information literacy as safeguarding practice enabled participants to transition into the complex pandemic information environment via three phases, which were described as unfolding, intensifying, and maintaining. The three phases of safeguarding were then conceptualised and unpacked in terms of positioning, agency and transition which emerged via agentic performance. Analytically, safeguarding can therefore be defined as the "agentic information focused work that participants undertook (i.e., their information literacy practice) to understand and then to mitigate the instrumental risk established via government discourse" (Lloyd and Hicks, 2021, p.1059).

Examining the COVID-19 crisis from an information perspective located the social as the central point around which constructions of risk spiral and are mitigated (Lloyd and Hicks, 2021, p.1065). This approach drew attention to the sociological and dialogical aspects of information experiences and helped us to unpack the complexity of information literacy practice during the initial stages of the pandemic. From this perspective, information literacy practice was inherent in safeguarding as participants engaged in information activities designed to help them navigate through emerging information environments, interrogate information at both an intersubjective and subjective level and then build their information landscapes. These findings are illustrated in Figure 2.

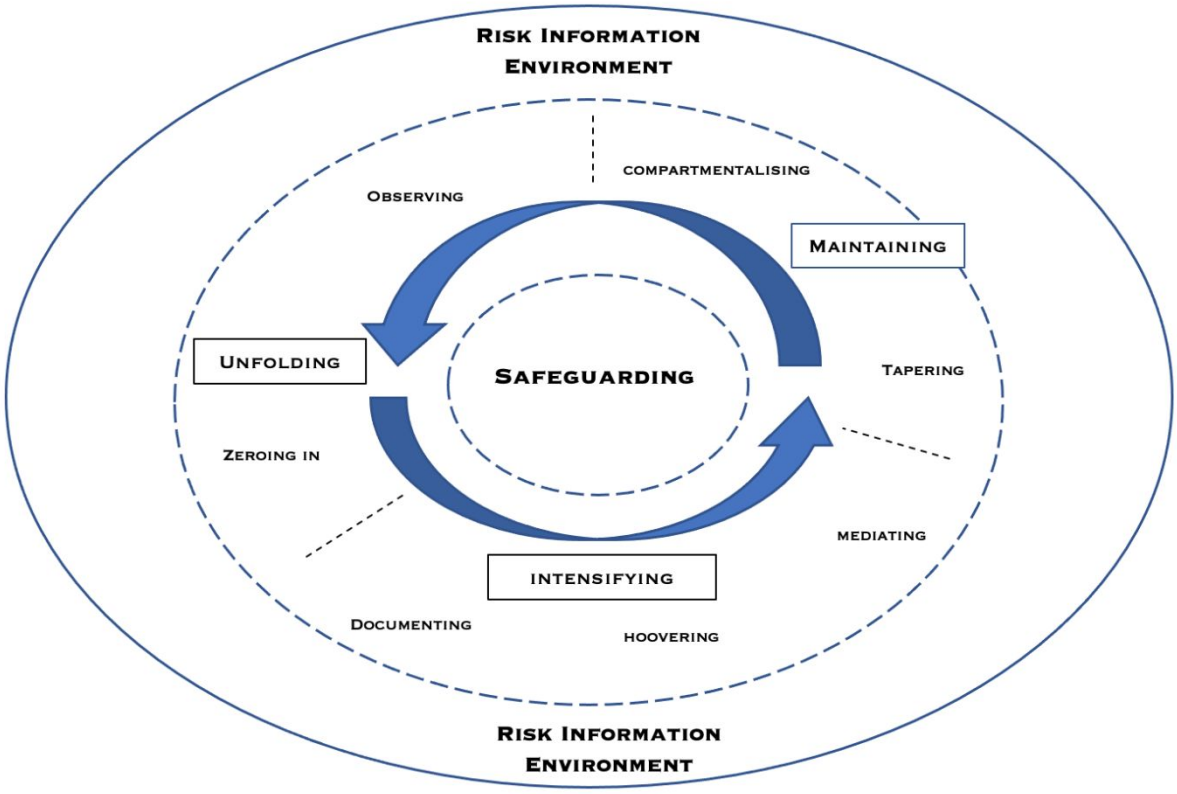

Figure 2: Information landscape of safeguarding (Lloyd and Hicks, 2021).

Present study November 2020-February 2021

The focus of Phase Two was to investigate what happens when people are required to operate in crisis mode over time, including the longer-term impact of crisis information dissemination on the development of understandings about risk, and what comes into view during this operationalisation. Of particular interest was the implications that the central theme of safeguarding has on information literacy practice and how the intensifying phase enables or constrains transition (Figure 1). The extension of the study into the November 2020-February 2021 period also allowed the researchers to incorporate experiences from later lockdowns into the sample, as well as participation from people who had experienced COVID-19. While various regional restrictions were introduced throughout the UK in September and October 2020, the study focuses on the November 2020 and December-February 2021 periods of widespread national lockdown measures.

In this paper, we identify activities that emerged after the initial lockdown and were created by accelerated information dissemination and messaging strategies, including avoiding, resisting, and boundary marking. These information activities emerged in the transitional space between the intensification and maintenance phases of transition and reference performances of people who have endured prolonged uncertainty as the UK repeatedly dipped into and out of lockdown measures. Some may consider these activities as negative or as indicative of a population that is disengaged and burnt out, especially in comparison to the

community reinforcement activities that emerged through information sharing during the first lockdown. However, we argue against this conception by suggesting that the activities described here should be viewed as vital safeguarding activities and a strategy of *empowerment* that is currently missing from the enabling-focused discourse of information literacy.

2. Literature Review

2.1 COVID-19 Research

Information use has formed a key theme within COVID-19 research, including help and health seeking behaviours (Zhao et al., 2020; Zimmerman, 2021), the information sources that people used to adjust to COVID-19 (et al., 2021; Bray et al., 2021; Chandler et al., 2021; Chen et al., 2021; Gerosa et al., 2021; Mohamed et al., 2020; Savolainen, 2021; Thomas et al., 2020; Wang et al, 2021) and coronavirus health literacy (Bray et al., 2021; Okan et al., 2020; Sykes et al., 2021). Emerging from a variety of research traditions, including health, sociology and childhood studies, these studies have noted the vital importance of official media in the initial stages of the pandemic, with Lupton and Lewis (2021) and Sykes et al., (2021), which formed two of the few qualitative studies, observing how this period was followed by a lessening of engagement with information. Notwithstanding, most research to date has focused on initial COVID-19 experiences (roughly March-May 2020) rather than the impact of subsequent national lockdown periods. An exception is a report from the British Red Cross (2021), which specifically examined the second UK lockdown in November 2020. As this lockdown was regional rather than national, this report provides valuable insight into the impact of the tier system on information access and use, with over 60% of participants stating that they felt confused about local restrictions and how to find accurate and up to date information. While the Red Cross study focused more on health and financial security, its analysis of support structures provides useful insight into the ongoing impact of COVID-19 on information interactions.

2.2 Saturation

One of the key themes that emerged from our study of the first UK lockdown was the concept of saturation. Saturation, which is not a concept that has been explored frequently in LIS, is a term that has been examined most prominently by Kenneth Gergen (2002), whose volume, *The Saturated Self* interrogates the impact of twentieth century technologies on social relations. Detailing how the growth of media formats has led to a multiplying of relationships, Gergen (2002, p.82) argues that technology's capacity to preserve the past and accelerate the future has created a state in which we have become overwhelmed or saturated by "voices of mankind- both harmonious and alien." (Gergen, 2002, p.26). While Gergen (2002, p.110) focuses on the impact of these changes on a person's sense of being rather than the media itself, he does, however, note how expanded human relationships have created a context "in which objective truth can no longer be warranted," an idea that suggests that saturation cannot merely be linked to an increase in the quantity of information sources.

2.3 Information Overload

A related concept that has been explored more prominently within LIS is the idea of information overload, which refers to a "subjective experience of the insufficiency of time needed to make effective use of information resources available in specific situations" (Savolainen, 2007). Forming what Bawden and Robinson (2008) refer to as one of the most familiar of the 'information pathologies', information overload has a long history (Bawden and Robinson, 2020; Hoq, 2014) but has been most comprehensively explored within the business and management sphere (Eppler and Mengis, 2004; Roetzel, 2019). Research by these authors, which examines the components of information overload and its impact on members of staff, has typically associated overload with an increase in the quantity of information, linked to innovations in production and distribution technologies, as well as personal limitations such as poor attitude (Eppler and Mengis, 2004; Miller, 1956; Roetzel, 2019). Other literature has taken a more nuanced approach, arguing that information overload emerges through the interplay of social dynamics, such as sudden changes in workplace structures and the need to balance multiple projects, rather than irrational behaviour (Allen and Wilson, 2003). Literature has also acknowledged the emotional impact of too much information on people, including stress and anxiety (also see Mellon, 1986; Wurman, 1989), although these feelings are often downplayed in favour of countermeasures that can be used to address symptoms of a heavy information load.

In contrast, there has been far less research examining information overload outside workplace settings, and the small handful of studies that have done so often find that its impact is overstated. An examination of the American home, for example, found that people who noted feeling overwhelmed by new media environments were in the minority (Hargittai et al., 2012), while Savolainen's (2007) study of environmental activists noted a similar lack of concern about excessive news and media. Notwithstanding, a significant proportion of respondents in Ndumu's (2019; 2020) study of Black diasporic immigrants to the United States reported experiencing information overload. This finding, which participants link to the various time-sensitive and authoritative pressures related to immigration, mirrors business research that connects being overwhelmed to change and transition. Similar ideas are seen in the field of health, which forms another site of transition, where "the volume and complexity of health information" has long been recognised as contributing to feelings of being over-burdened (Khaleel et al., 2020; also see Ramirez and Arellano Carmona, 2018; Swar, Hameed and Reychav, 2017). Interestingly, these studies hint at the impact that the quality as well as the quantity of information has upon people, including difficulties in determining between "conflicting information from the media, friends/family, and health care providers" (Ramirez and Arellano Carmona, 2018), an idea that picks up Gergen's concerns about saturation. At the same time, emotion is still treated cursorily in this work, and is often seen as purely having a negative impact on information seeking performance.

Within the COVID context, information overload has been identified within research examining the first lockdown, with a study in Germany noting that over 55% of respondents felt bewildered by the amount of COVID-19 information available to them (Okan et al., 2020). Similar ideas were picked up on in Finnish research, which blames "social media exposure" for the feelings of information overload and information anxiety noted among the study participants (Soroya et al., 2021). While this study was limited to university affiliates, the stress that participants reported was linked to both the variety and the quantity of

information that was produced during the initial stages of the pandemic. Studies in Nigeria, Malaysia and the US further connect information overload to the frequency of COVID news updates (Mohamed et al., 2021), while another European research study corroborates the impact of social media on the COVID-19 "burden" (Brailovskaia et al., 2021). Research also examines more specific forms of information overload, including news overload, which refers to perceived overload from both traditional and social media news sources. Drawing attention to the overwhelming range of formats in which news appears (including data journalism, multimedia, and written news), the diary methods used in Ahmed's (2020) reveal that the circulation of misinformation is seen to add to the sense of feeling overwhelmed. Nonetheless, research to date remains limited to the initial stages of COVID-19, and there is little examination of how saturation plays out during subsequent lockdown months.

2.3 Information avoidance

Information avoidance, which is often considered alongside information overload as one of the strategies that people employ to deal with the problems that excessive data causes (Savolainen, 2007) form another key theme that emerged from the findings of our first study. Previously side-lined due to the field's focus on seeking and acquiring data, information avoidance is now considered to play a key role within information behaviour (Case and Given, 2016, p.6; Sweeny, Melnyk, Malone and Shepherd, 2010), as evidenced by its inclusion in definitions and models of practice (e.g., Johnson, 1997). Traced back to early twentieth century communication and psychology theories, information avoidance was initially characterised as either a form of selective exposure- the means to ignore information that is incongruent with prior beliefs- (Case et al., 2005; Wilson, 1996), or as a character trait, an idea that was picked up in Miller's (1995) typology of monitoring and blunting. Since then, research has started to connect information avoidance with uncertainty management (Barbour et al., 2012; Sairanen and Savolainen, 2010), an idea that has reframed the evasion of information as either an active or a passive strategy (Narayan et al., 2011) as well as one that can be temporary and more permanent (Sweeny et al., 2010). Literature has also begun to examine the techniques that people employ to avoid information, including filtering, withdrawal (Savolainen, 2007) and queuing (Wilson, 1995) strategies, amongst others. These ideas further differentiate information avoidance from knowledge dismissal, which centres on the rejection of information rather than its circumvention (Sweeny et al., 2010).

Information avoidance can consequently be seen as a complex and sophisticated activity that is employed for several different purposes rather than merely constituting a personal information style. These ideas have been extended considerably through health research that has examined how, why, and when people may shun information (Sweeny et al., 2010), particularly in relation to diseases such as cancer. Focusing attention on the critical role that information avoidance plays in helping patients to deal with the "shock of diagnosis, the burden of treatment decisions, and the management of side effects" (Germeni and Schulz, 2014), these studies delicately tease out how the eschewing of information must be seen as intricately entwined with emotion, including prolonging hope as well as mediating fear and anxiety (Germeni and Schulz, 2014; Lambert et al., 2009; Sweeny et al., 2010). The recognition that people also evade information to maintain individual and familial boundaries (Barbour et al., 2012; Lambert et al., 2009; Myrick et al., 2016) as well as to protect personal

privacy, including sharing information with insurers and employers (Lipsey and Shepherd, 2019) further suggests that information avoidance must be seen as a purposeful, agentic practice rather than irrational behaviour. These ideas move research beyond the implied judgement of intellectual laziness that is often found within the concept of satisficing (Simon, 1976) as well as challenging the perception that emotion uniquely impedes information activity (Soroya et al., 2021).

Information avoidance has formed the subject of a handful of COVID studies, with research arguing that the anxiety caused by too much information leads people to minimise interaction with relevant information (Karim et al., 2021; Soroya et al., 2021). Information avoidance has further been noted within the series of Reuters reports that examined news and media consumption in the UK until just before the start of the second lockdown (Nielsen et al., 2020b). Interestingly, while these surveys noted a significant decline in news consumption throughout the first lockdown period, the authors linked this finding to deteriorating trust in the government rather than feelings of information overload. Information avoidance was also found within Bray et al.'s (2020) international survey of children and their caregivers with several children expressing that they did not want to hear any more information about the pandemic because it is "boring" or they "are sick of hearing about it," a sentiment that research shows is often shared by their adult counterparts. Ahmed's (2020) diaries of COVID provide further insight into the strategies used by participants to avoid news, which include filtering, inter-platform verification and refraining from sharing. However, as with information overload, research has remained limited to initial lockdown periods, and there has been little examination of information avoidance over time.

3. Methodology

The methodology for this study has been reported in detail in the Phase One study (Lloyd and Hicks, 2021). In summary, a qualitative methodology was employed which employed constant comparative techniques of constructivist grounded theory (Charmaz, 2014). The focus on the coding was to identify similarities and differences in the lived experiences reported by participants.

Semi-structured interviews were carried out online from November 2020 - February 2021 during the UK's second and third lockdown period. These interviews followed up on themes that emerged in the first phase of the research and added to the analytical pool of Phase One. Interview questions were focused on information interactions during 1) transition out of the first national lockdown period in June-September 2020; 2) transition into and out of the second regional/national lockdown in October/November 2020; and 3) transition into the third national lockdown in December 2020/January 2021. Interviews took place online using an end-to-end encrypted video conferencing tool and lasted between 30 and 50 minutes. Interviews were audio-recorded and transcribed; transcriptions were checked by each of the two researchers and follow up questions were emailed to participants where necessary.

Participants were recruited via researcher and institutional social media accounts as well as through a snowball sampling method. Fifteen participants took part in this second

phase of research, including seven women and eight men (see Table 1). Unlike the sample for Phase One, the Phase Two sample included more male participants. This ensured a total of 32 participants between the two phases of the study (19 women and 13 men). Participants included key workers and people working from home as well as students, retirees and people taking on home-schooling, caring and volunteer roles. Participants represented a range of ages and were located throughout the UK (see Table 1).

Gender	**Location**	**Age-range**	**Role**	**Interview date**
Female	Devon	60+	Retired	Nov. 2020
Male	Dorset	30-60	Recruitment consultant	Nov. 2020
Female	Yorkshire	18-30	Student	Nov. 2020
Male	Dorset	30-60	Software engineer	Nov. 2020
Male	Edinburgh	18-30	Student	Nov. 2020
Male	Lanarkshire	18-30	Railway worker	Nov. 2020
Male	Bristol	30-60	Engineer	Dec. 2020
Female	Somerset	60+	Retail worker	Jan. 2021
Female	Kent	60+	Retired	Jan. 2021
Male	Bucks	60+	Engineer	Feb. 2021
Female	Cheshire	60+	Retired	Feb. 2021
Female	Somerset	30-60	Accountant	Feb. 2021
Male	London	30-60	Consultant	Feb. 2021
Male	Liverpool	30-60	Religious minister	Feb. 2021
Female	Liverpool	18-30	Homemaker	Feb. 2021

Table 1: Participant demographics

Data were coded and analysed using the constant comparative techniques that are employed in constructivist grounded theory methods (Charmaz, 2014). This approach focused our attention on identifying commonalities across participant experiences, including in relation to information sources and strategies, as well as meaningful themes and perspectives. Interview

recordings and transcriptions were independently coded by each researcher prior to several online meetings to discuss the coding themes. Limitations of the second phase of the study include the relative difficulty attracting young participants (18-25) as well as increasing lockdown fatigue, which may have impacted participants' interest in the project.

4. Findings

Findings from the second phase of the study indicate that safeguarding practice continued to evolve as the UK re-entered a lockdown state. In the intensification phase, which formed the second of the three transitional phases identified in our first study (Lloyd and Hicks, 2021), people's reliance on the dissemination of information from authoritative and opinion driven sources as well as their intensive use of communication platforms, including Twitter, family, friend and workplace Zoom meetings and WhatsApp groups, established a multi-layered information environment that was centred on the understanding, interpretation, and mitigation of risk. As the pandemic continued, however, participants began to actively create boundaries between themselves and information to reduce the noise of multiple narratives and voices. As one participant put it:

> "Everybody was putting in their 'tuppence worth' to the point that it was becoming seriously annoying because some of the information that they were giving was wrong, and there were a couple of serial Facebook virus experts that I actually unfollowed. "(P16)

This sense of feeling overwhelmed subsequently led to the creation of limits around the types of information or information sharing platforms that shape accepted information practice. The gradual withdrawal from the pandemic information environment is of particular interest because information activities such as avoidance are often viewed negatively within information literacy discourse (Hicks & Sinkinson, 2021). However, lived experiences of participants suggest that this strategy forms part of safeguarding in the transitional space between intensification and maintenance periods, an idea that leads to the understanding that empowerment (the primary discourse of information literacy's value) is as much about resistance and constraint as it is about enablement.

Saturation and noise

In this phase of the study, saturation is identified as an outcome of the intensifying period, which is marked by desperate attempts to rebuild information landscapes that have been disrupted through the emergence of rapidly changing and socially mandated instrumental information environments. Representing an increasingly desensitised state, saturation is used to describe a situation where people become overwhelmed by the abundance of information and the continual exposure to experiences and viewpoints of multiple others. The theme of saturation consequently appears to explain a transitional space between the intensifying and maintaining spaces identified in Phase One of the study (Figure 1).

Findings from the current study suggest that once participants become saturated with information, their intent becomes to either actively avoid information or to diffuse the information load by only seeking information at the moment of need. These strategies are aimed at reducing the 'noise' created by the accelerated and continual flow of information that, situationally, marks the shift from the normal to the 'new normal.' From a sociocultural perspective, noise can be described as the increased array of information that is accessed either by the individual or via mediation (others) and which contributes to the development of socially situated knowing between and across the situations that surround a person. Noise is exacerbated by the multiple means through which information is created, disseminated, and circulated. In the case of the pandemic, participants felt "bombarded*"* (P30) by instrumental governmental, scientific, economic, and medical information coupled with socially mediated interpretations derived from friends, family, and online sources.

Noise is consequently linked to the rapidity of change, including the need to stay up to date with constantly evolving governmental rules and regulations, as well as accelerated levels of information dissemination across multiple platforms, including an unexpected rise in number of updates from friends and family on information sharing platforms such as WhatsApp (P32). Noise is also experienced affectively, with participants referring to their engagement with the constant stream of news as "doom scrolling" (P31) or as "depressing," (P18, 20, 29, 30). At other times, noise was experienced far more passively, with one participant commenting on how a news broadcast about Tom Moore, a centenarian who raised money for the NHS, "set [her] off in tears" (P25), an observation that appears to justify Bateson's (1972) positioning of information as a difference that makes a difference or something that requires context to make it useful or able to be acted upon.

Evolving procedures and the need for affirming human connection during the early days of the pandemic meant that the need to proactively "hoover up" the news constituted a formative aspect of safeguarding practice. However, participant anxieties demonstrate that these activities soon lead to saturation and the need to develop alternative strategies of dealing with this onslaught of information.

Avoidance

The intensity of this time meant that for many participants, actively avoiding information formed the major strategy to address saturation and mitigate the information risk of being overwhelmed. As one participant put it:

> "I became overwhelmed… what I decided to do was focus on the information that I need to know, I just started to compartmentalise stuff and only look at stuff that was particularly relevant to me, which was how to keep safe" (P16).

Avoiding information creates the conditions and space to reduce the noise that is created by the pandemic's accelerated information environments. The space created enabled participants

to contextualise and reflect upon the narratives of the new norm and reconcile new information with current knowledge.

Participants reported avoiding information in several ways. For some participants, the space that they needed could be achieved through altering their usual routines slightly, including negotiating a strict five-minute limit for any COVID-talk with friends to avoid updates that they knew would overload them further (P18), or inundating their Twitter feed with happy coronavirus news feed to drown out negative information (P20). Others purposefully reduced their engagement with specific information sources, including making the decision to only check statistics (P28) and capping their time in front of the TV or mobile device to times of need (P2, P3, P5, P11, P15, P30), an activity that Karim et al. (2021) also observed in their study of COVID coping strategies. The perception that the BBC was more disheartening than ITV further prompted participants to switch channel (P1, P30), a strategy that Chen et al. (2021, p.192) further noted in their study of older adult COVID information seeking. Participants also took more extreme measures to reduce their engagement with information, including muting opinion-driven WhatsApp channels (P2), refraining from checking social media (P17) and deleting social media apps (P26). As one participant put it, "I don't listen to long conversations that are going on… just tell me what the facts are" (P28).

Participants additionally noted how they actively limited exposure to information by retreating into their community, for example by only socialising with people who worked from home (P31, P29). The reliance on a group of trusted individuals helped to ensure that only the most relevant information reached them as well as reducing the burden of having to evaluate the credibility of the source. Others commented on how they started to focus more on local rather than national news (P28), with a participant in the south of England talking about how he only tuned into the information that would directly impact him rather than "Northwest" updates (P29). Increasingly localised news consumption was also noted in the British Red Cross report (2021), although they noted that local authorities were not uniformly proactive in disseminating relevant regional information.

The range of strategies employed to mediate saturation means that information avoidance is consequently understood to form an active and agentic strategy that participants employ to protect their fragile mental health rather than a dangerous withdrawal from society. This was particularly the case in the third UK lockdown, which was seen to form a particularly challenging time due to its coincidence with the wet and dark winter months. Agency is referenced in participants' decisions to mitigate overload, including through altering practices to avoid updates and broadcasts (including from friends) as well as deleting platforms to limit the amount of news or opinions to which they had access. Saturation can consequently be conceptualised as the catalyst for information avoidance that occurs when external demands for information exceed people's capacity to make meaning.

Resistance

As the pandemic continues, however, avoidance becomes inextricably entangled with the idea of resistance, as participants note how they start to mediate saturation by resisting official governmental discourses. Often becoming more common in later lockdowns and when temporary rules and regulations alter, resistance is consequently predicated upon the

growing fragmentation of risk rather than a wholesale rejection of authority or expertise. In this sense, saturation creates the conditions for resistance as people seek to exert agency and influence over the narratives that attempt to define them.

One of the main reasons why participants report avoiding government information is when official advice is perceived to put their own health or that of their families in danger. During the lifting of restrictions after the first lockdown, for instance, when the government employed a variety of coercive measures to encourage people to support the hospitality industry, participants noted ignoring government advice to socialise because they did not feel it was "worth" the risk to their health (P23, P26, P31, P32). Minimising risk is generally understood to be "one of the hallmarks of a rational and responsible individual" (Armstrong and Murphy, 2012, p.318), particularly during a pandemic. However, participant refusal to engage with government advice illustrates how risk discourses must also be accessible to people; in this situation, the economic argument that lay behind official advice did not cohere with participants' values about what constituted acceptability and what constituted harm. Illustrating how perceptions of risk are mediated through sociocultural processes, these reactions also illustrate how risk is shaped by affective judgement as people weigh up what they consider to be threatening to themselves and their community.

At other times, however, resistance to government advice becomes more overt with a handful of participants indicating how they deliberately resisted official recommendations about risk and safety to protect their own wellbeing. For example, participants noted purposefully avoiding looking up information related to the distance they were allowed to drive for exercise when they suspected that this knowledge would force them to give up something that was benefitting their mental health (P18). Another participant admitted that they had avoided government advice to download the NHS Test and Trace app because they feared it would curtail their ability to maintain their independence (P27). Providing further evidence of the role that the body and emotions play in the assessment of risk, these seemingly 'subversive' actions draw attention to how risk is also shaped temporally, as people envisage what it would be like to live with certain undesired events. At the same time, participant refusal raises further questions about what Armstrong and Murphy (2012) refer to as the romanticisation of resistance, or the temptation to celebrate agency without due attention to the possible consequences of action for the local community.

Resistance can consequently be understood as both nuanced and subtle as people start to mitigate the risk of being overwhelmed by saturated information environments through the negotiation of powerful discourses. Focusing attention on participants' changing relationship with instrumental understandings of risk, the emphasis on interaction illustrates how resistance is centred on reflexivity as people weigh up and respond to discourses that attempt to regulate their behaviour. At the same time, the range of narratives that participants draw upon to legitimise their actions illustrates that the difference that information makes (Bateson, 1972) can be both discordant and cooperative as people engage with complex social stances and positions.

Discussion

The COVID-19 pandemic has allowed us to interrogate information literacy as it has unfolded in a complex and intricate information environment. In the current phase of analysis, we focused on identifying the activities that enable and constrain the transition from the intensification phase to a more stable and maintaining phase. Through this work, we note that the agentic information focused work of safeguarding extends to include both information avoidance and resistance as people look to mitigate overload and anxiety associated with the long-term implications of operating in crisis mode. Safeguarding is consequently represented as a spiralling and iterative transitional process that emerges as an information practice to mitigate the various social, economic, health and material risks that are produced in the transition to the COVID environment.

The important role that safeguarding plays in helping people to mediate the new and non-normative ways in which everyday life plays out demonstrates that transition towards a more stable phase of lockdown life must be seen as irreparably shaped by participants' avoidance and resistance strategies. Like information literacy, transitions literature has tended to equate the mediation of change with proactive information activity; nursing transitions theory, for example, positions healthy transition as determined through the "mastery of the skills and behaviors needed to manage… new situations or environments", which includes making decisions, and accessing resources (Meleis et al., 2000, p.26). However, transition must also be understood as facilitated through reflexive processes and agentic performance (Kralik, 2002, p.149) as people interpret, reframe, and manage the impact of transformation within their lives. Within the context of the pandemic, information avoidance and resistance can consequently be understood as facilitating transition by forming a means through which people make conscious choices about the shape of their information environment, including how they regulate everyday temporalities and regain control over both push and pull mechanisms. The reactive elements of practice further enable transition by creating a protective buffer zone where people can negotiate the emotional impact of change, including the capacity for self-care. Similar ideas have also been noted in information research that draws upon the principles of the Slow Movement (Poirier and Robinson, 2014).

It would be hard to deny that transition could also be impeded by information saturation; participants who mitigate being overwhelmed through avoiding channels of information or reducing access to trusted sources could limit their capacity to become informed or maintain a critical level of knowledge about the pandemic trajectory and its consequences. In the context of the pandemic, avoidance of reliable information sources in favour of mis- and dis-information could also have dangerous consequences. However, reports that the UK's use of and trust in independent experts, scientists and health organisations grew during the pandemic (Nielsen et al., 2021; Nielsen et al., 2020) would seem to corroborate that information avoidance helped to regulate the intensity of this time rather than facilitating a problematic withdrawal from society. Moreover, blaming or pathologising individual actions would seem to negate the structural issues that must be implicated in problematic information avoidance, including the "inadequacies" of health

information systems and regulatory governmental responses in the face of misinformation (Southwell et al., 2019).

The wide range of risks that are produced during the pandemic mean that avoidance and resistance strategies also have an important impact on our understandings of how risk is embedded and brought into view. Differences in risk perception have typically been linked to a lay-expert divide, where an 'emotional' public fails to recognise risks laid out by 'rational' scientific experts. However, the important role that government advice plays within the pandemic disrupts this binary by bringing other competing logics and knowledge claims to bear upon the ways in which people identify and manage risk. The reactive elements of practice consequently underscore how knowledge of risk must be seen as centred on the negotiation of the "meanings, logics, and beliefs" (Lupton, 2013a, p.44) that cohere around and give form to material phenomena rather than merely on an uncritical acceptance of 'neutral' or objective expertise. At the same time, the emphasis that resistance places on the value that people ascribe to adversity also draws attention to the important role that emotion plays in bringing risk into view, including feelings of fear, anger, safety, and security (Lupton, 2013b, p.639). These ideas position emotional responses as a "form of thinking" (Thrift, 2004, p.60) that makes sense to a person rather than a distortion of rational judgement.

Lastly, the positioning of avoidance and resistance as important aspects of safeguarding practice must also challenge the language used to describe the assumed spread and effect of available information on people, including the labelling of information strategies such as avoidance as 'information pathologies' (Bawden and Robinson, 2009). This term, which positions the reactive elements of information literacy practice as abnormalities or deviations from a healthy condition, has since been joined by references to the COVID-19 'infodemic,' another medicalised metaphor that draws upon the pandemic's epidemiological language to warn of the dangers of excess information (Simon and Camargo, 2021). Within the present study, it is evident that participants' awareness of the accelerated amount of formal and informal pandemic information that is available to them has the potential to promote the idea of a pathology. However, given the important role that avoidance and resistance are seen to play within people's safeguarding practices, we argue that fears about the overabundance of information are more commonly linked to "normative ideals of how citizens should inform themselves about current issues" (Simon and Camargo, 2021, p.9) rather than threats to ways of knowing. Along the same lines, we contend that the continued medicalisation of information literacy risks giving new impetus to deficit-driven prohibitions and concerns that have traditionally structured the field (Hicks and Lloyd, 2020).

Implication for information literacy practice.

The important role that saturation has played within the COVID-19 pandemic means that findings from this study have numerous implications for the ways in which we conceptualise information literacy practice. The prevailing discourses and statements that frame information literacy often situate the practice in terms of a proactive series of activities and

skills that 'empower' people to make informed decisions (IFLA, 2005; ACRL 2016). This is an affirmative view of information literacy that links positive learning outcomes to a person's active and enabling relationship with social, epistemic, and embodied information modalities (Lloyd, 2006). For example, people are seen to think critically and make informed decisions through actively interrogating the information environment. The affirmative narrative is reinforced through the key role that active learning plays within the field's teaching practices as well as in its guiding documents (Hicks and Sinkinson, 2021). Findings from the first phase of this study confirm these affirmative elements, noting how people reorient themselves within the new COVID-19 context through a range of interactive information activities (Lloyd and Hicks, 2021).

What comes into view in the present study, however, is a focus on the ***reactive*** elements of information literacy practice or the ways in which people respond to the conditions that create the practice rather than how they proactively prepare for and manage them. Referring, in this study, to how participants reported avoiding and resisting information, these reactive elements of practice are typically either unaddressed or denigrated within information literacy's guiding discourses due to the perception that selective exposure constitutes a problematic disengaged or deviant state (Hicks and Sinkinson, 2021). However, affirmative views of information literacy are challenged through the critical role that reactive activities play within this study, including helping people to go on during an emotionally draining time or to weigh up diverging risk discourses. Renewed interest in saturation, avoidance and resistance consequently raises questions about the positioning of proactive information activity as the sole means to mediate the affective dimensions of practice, as in Kuhlthau's (1991) information search process. The recognition that the reactive side of the affirmative/non-affirmative binary is rarely explored within practice means that these findings also contest the labelling of information literacy research and teaching as holistic (e.g., Bruce et al., 2014; Secker and Coonan, 2011; SCONUL, 2011).

The importance that this study places on the reactive elements of information literacy practice role further forces us to reconsider how the concept of empowerment is understood in relation to agency. In an earlier paper, we argued that higher education discourses position empowerment as a central outcome of information literacy education (Hicks and Lloyd, 2020). These discourses are premised upon the idea that the ability to proactively find, evaluate and use information will empower learners to make informed choices within fast-changing information environments (Hicks and Lloyd, 2020). However, the recognition that information literacy practice is shaped by the conditions and activities that deliberately constrain access to information as well as those that enable it means that findings from this study necessarily challenge these narratives, including how empowerment must centre on positive and affirmative action. In effect, the enactment of avoiding and resisting information constitute a form of enablement that is central to agency and empowerment arguments for information literacy. At the same time, the fragility of the empowerment discourse indicates how this warrant requires a more critical examination, particularly in terms of what activities and skills are authorised, acknowledged, and included within information literacy practice.

Implications for information literacy pedagogy

It is inevitable that the information environment that is being constructed in response to the COVID-19 pandemic will be viewed as another validation of the importance of information literacy education, particularly in relation to health, well-being, resilience, and the capacity to make informed decisions through empowering, strategic information use. While we do not dispute this, the present study has led to a realisation that we require a far more nuanced understanding about what constitutes agency in relation to empowerment before these claims can be made. In effect, we must go beyond the lip service often paid to empowerment in motherhood statements about information literacy to examine the complexity of enablement, particularly in compressed or emotionally intense contexts. The confinement of most studies of information literacy to a specific moment (i.e., library classes, assignment preparation, a workplace task) (cf. Hicks, 2016) means that there is also a need for research into how 'empowering' practice plays out or becomes more mature over time.

The importance that this study accords to the reactive elements of information literacy also has implications for teaching practices, including how concepts of saturation, avoidance, and resistance can be accommodated within educational curricula that typically focus on information literacy's positive narrative. While some efforts have been made to interrogate the focus on proactiveness within information literacy classrooms (Hicks and Sinkinson, 2021), findings from this study demonstrate that if information literacy teaching is to succeed during times of transition and crisis, we must move beyond merely focusing on what enables the practice. More generally, these ideas illustrate the need to continue interrogating institutional approaches to information literacy; the positioning of saturation, with its implications of inefficiency, as a problem to be solved, for example, confirms that information literacy is still understood as an inherently rational project. The recognition that these ideas understand both the learner and the research process in terms of individual cognitive logic consequently demonstrates that there is still a long way to go before information literacy teaching embraces the social, discursive, and corporeal dimensions of practice.

Conclusion

The findings from the second phase of the study have enabled us to develop our understanding about what comes into view when information literacy practices evolve to accommodate the 'new normal.' The identification of the important role that reactive elements play at this time have allowed us to build upon findings from Phase One of the study to examine how people safeguard against the risks associated with intensified and accelerated information dissemination in more detail, including the role that saturation, avoidance and resistance play during transitional spaces. Evidence from this phase of the research has subsequently allowed us to start problematising the concept of empowerment, which forms one of the central concepts of information literacy discourse as well as a major outcome of associated educational endeavours.

Phase Three of this study into people's information practices during the COVID-19 pandemic will continue this research by examining desensitisation in relation to COVID vaccine hesitancy, including the affective and temporal dimensions of risk as well as the impact of the crisis on evidence-based practice and decision-making. Beyond the pandemic, the flaws that this study as well as our previous work (Hicks and Lloyd, 2020) has noted within typical empowerment narratives mean that future research should continue to interrogate the use (and abuse) of ideas of enablement and agency within information literacy practice, as well as in related areas such as health literacy, where empowerment is seen to form a similarly autonomous outcome of information activity. Future research should also continue to study the reactive elements of practice in relation to other transitional and crisis contexts, including in academic information literacy and transitions to and from different scholarly, learner and workplace identities.

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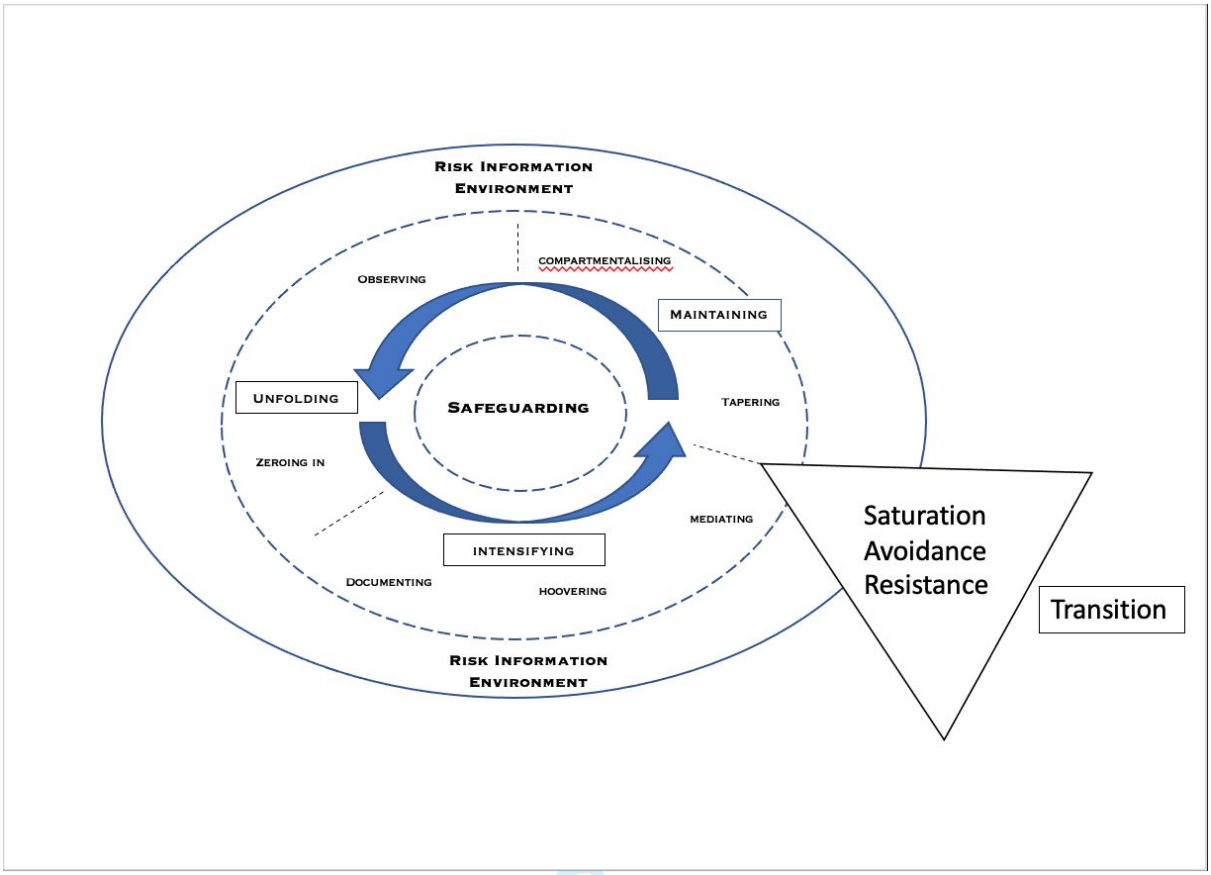

Figure 1: The transitional space between intensification and maintenance

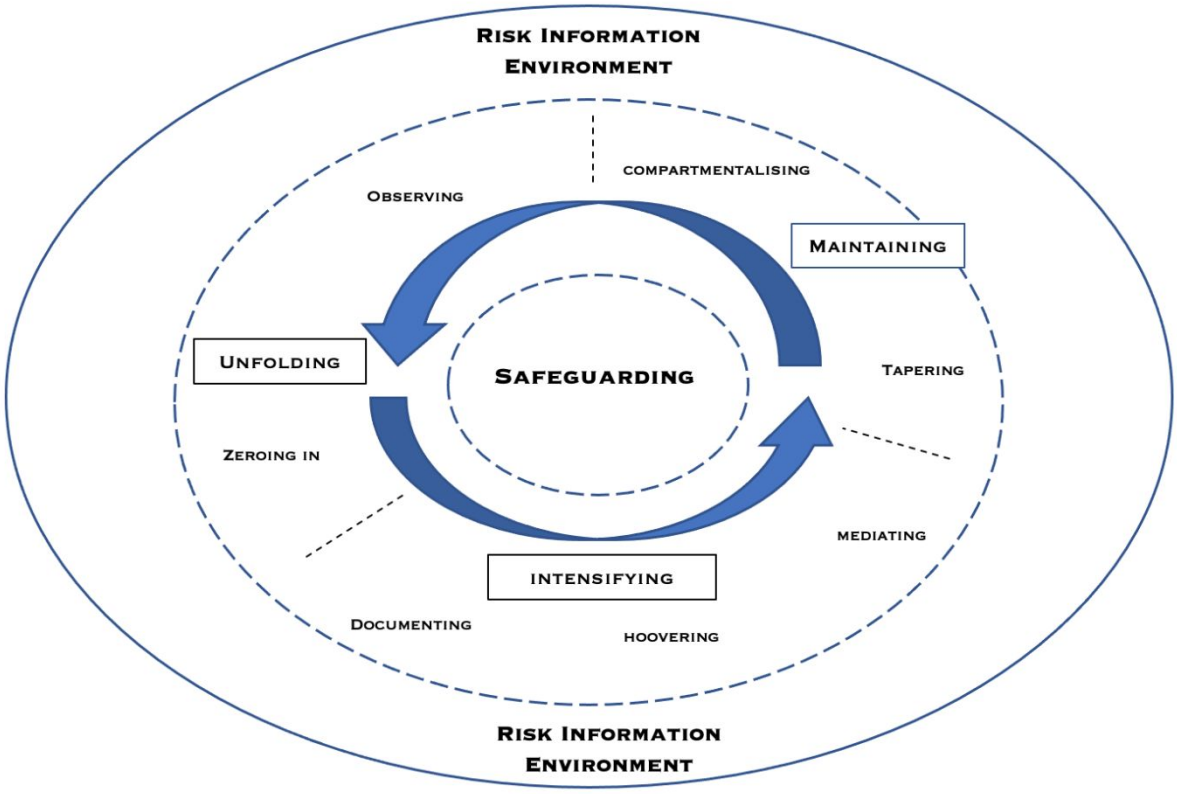

Figure 2: Information landscape of safeguarding (Lloyd and Hicks, 2021).

Gender	Location	Age-range	Role	Interview date
Female	Devon	60+	Retired	Nov. 2020
Male	Dorset	30-60	Recruitment consultant	Nov. 2020
Female	Yorkshire	18-30	Student	Nov. 2020
Male	Dorset	30-60	Software engineer	Nov. 2020
Male	Edinburgh	18-30	Student	Nov. 2020
Male	Lanarkshire	18-30	Railway worker	Nov. 2020
Male	Bristol	30-60	Engineer	Dec. 2020
Female	Somerset	60+	Retail worker	Jan. 2021
Female	Kent	60+	Retired	Jan. 2021
Male	Bucks	60+	Engineer	Feb. 2021
Female	Cheshire	60+	Retired	Feb. 2021
Female	Somerset	30-60	Accountant	Feb. 2021
Male	London	30-60	Consultant	Feb. 2021
Male	Liverpool	30-60	Religious minister	Feb. 2021
Female	Liverpool	18-30	Homemaker	Feb. 2021

Table 1: Participant demographics