

SHAME RESILIENCE, SOCIAL SUPPORT, AND HUMOR IN
AN ONLINE COMMUNITY OF PATIENTS WITH
ANORECTAL DISORDERS

by

GULMIRA AMANGALIEVA

REBECCA K. BRITT, COMMITTEE CHAIR
STEVEN HOLIDAY
HEATHER J. CARMACK

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ABSTRACT

People suffering from anorectal disorders face many challenges in everyday life but also experience shame due to social stigma. For many, an online community might be the only place where they can share their experience, seek advice, and get social support. Applying Shame resilience theory (SRT) (Brown, 2006), the typology of social support (Cutrona & Suhr, 1992), and the classification of humor styles (Martin et al., 2003), the researcher aimed to understand what role an online community, *r/hemorrhoid*, serves for the patients with anorectal disorders. An inductive computational content analysis via Leximancer revealed key themes of the online discussion: symptoms disclosures (symptom-related concepts, such as “blood” or “diarrhea”), routine practices (self-care, treatment, and daily routine), and community participation (concepts related to subjects, moderation policy, and society’s issues). In addition, a theory-driven deductive approach was utilized that resulted in several themes related to shame resilience, social support, and humor: belongingness (authentic connections with others), autonomy (critical, independent thinking), security (feeling of safety and confidence), and efficacy (exchanging information and advice for recovery) (the BASE model). The combination of these two methods produced insights about health disclosures, online peer support, humor, and patient-provider communication. Participants made sense of their disease through sensitive disclosures to fight shame and gain psychological relief. This community became an essential platform where patients share their advice and expertise regarding diagnostics and treatment. Humor served two

primary functions: to affiliate oneself with their community and to defend oneself. There were mixed findings regarding patients' trust and willingness to communicate with healthcare providers. There is a need to investigate further the relationships between anorectal patients and medical practitioners to foster deeper mutual understanding.

Keywords: shame, social support, humor, online community of patients, anorectal illnesses, thematic analysis

DEDICATION

To my parents who always think about me and wish me the best.

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INTRODUCTION

Individuals with stigmatized diseases can experience adverse direct health outcomes and psychological discomfort. They may feel isolated, inferior, and socially rejected due to their non-conforming bodies or behaviors (Dolezal & Lyons, 2017). There are two interconnected mechanisms involved. First, individuals might be subjects of social prejudice due to this stigma. According to Goffman (1963), stigma is an “attribute that is deeply discrediting” and conveys devalued stereotypes (p.3). Second, physical and psychological losses may humiliate individuals as they experience shame. The latter has been regarded as a “highly unpleasant self-conscious emotion arising from the sense of there being something dishonorable, immodest, or indecorous in one’s own conduct or circumstances” (“Shame,” n.d.).

Among diseases that are highly stigmatized – e.g., leprosy, AIDS, mental disorders, and certain skin diseases (Sartorius, 2007), anorectal illnesses, such as hemorrhoids, anal fissures, and fistulas, tend to provoke shame. A study based on colonoscopy screening showed that although 380 out of 976 participants (38.93%) suffered from hemorrhoids, only 170 (44.74%) out of this number complained about symptoms (Riss et al., 2011). This data suggests that despite the prevalence of hemorrhoids among the adult population, some individuals might not notice typical symptoms or be reluctant to seek medical help until the situation becomes urgent. Many cultures consider anorectal disorders shameful and taboo (Tol et al., 2019). In a patient-provider setting, patients may find it psychologically uncomfortable to discuss their conditions with health care providers, get undressed, and undergo invasive medical examinations (Yue, 2021). Moreover,

anorectal diseases are often associated with an unhealthy lifestyle (being sedentary, having an imbalanced diet, sitting on the toilet too long) in cultures that emphasize personal responsibility (Yue, 2021). Thus, an individual facing this health problem might become a subject of blame in their society. The stigmatization of the disease deteriorates mental and physical conditions and impedes recovery (Sartorius, 2007).

Although social support from family, friends, and health providers is crucial, not many individuals are ready to reveal shameful health-related issues (Grodensky et al., 2015). For those suffering from stigmatized diseases, online communities might be a place where they share their experiences, seek advice, and seek various forms of social support. When conducted anonymously or pseudonymously, online communication can disinhibit users who would otherwise feel uncomfortable discussing embarrassing health topics (Lee & Hawkins, 2010). Sharing personal stories with people with similar experiences provides psychological relief and boosts shame resilience (Mugerwa & Holden, 2012). Further, they might use humor in their online interactions to externalize shame and challenge the negative public evaluation of their disease. If adequately managed, online communication can supplement traditional patient-provider relationships and potentially contribute to the improvement of health outcomes (Britt et al., 2020).

While the unique features of online spaces are well understood, and a positive value of social support in medical treatment has been long recognized, there is an existing gap in the literature on the dominant themes in online support communities. The research on online communities of individuals suffering from anorectal illnesses is also lacking. This thesis will explore primary themes in an online discussion led by users of the *r/hemorrhoid* subreddit. Additionally, the goal will be to examine the role of shame resilience, social support, and humor in the online context among patients with such stigmatized diseases. From a practical perspective,

understanding online discourse can potentially contribute to better communication between health care providers and patients, thereby enhancing medical care.

REVIEW OF LITERATURE

The first part of the literature review will be dedicated to the phenomenon of shame and stigma. This includes studies on how shame and stigma affects people, how they overcome associated difficulties, and limitations that will be discussed. An explanation of the theory used to guide the thesis – shame resilience theory and its central assumptions, will follow. Next, social support in online communication, including the intersection of humor and social support, will be discussed. Finally, the role of shame, social support, and humor applied to the experience of individuals with anorectal and other diseases will be addressed under the guidance of shame resilience theory. Following this, the research questions will be presented.

Stigma and Shame Resilience in Communication Research

Shame is a “highly unpleasant self-conscious emotion arising from the sense of there being something dishonorable, immodest, or indecorous in one’s own conduct or circumstances” (“Shame,” n.d.). Shame is considered a maladaptive emotion that negatively impacts health, interpersonal communication, and overall well-being (Tangney & Dearing, 2002). Although shame is a common emotion in everyday life, it is invisible and taboo (Scheff, 2003). Scholars distinguish between two types of shame: external and internal. *External shame* indicates the lack of acceptance or desirability in a group in the context of the social threat system (Gilbert, 2003). For example, a supervisor can induce a derogatory comment to the subordinate, leading to the latter’s anxiety, low self-esteem, and avoidant behaviors (Fatima et al., 2020). The second type is an *internal shame*, defined as a discrepancy between an authentic self and an ideal self or as an occurrence of an undesired self (Higgins, 1987). In other words, an individual may feel ashamed

because of their unwanted self-identity. Additionally, scholars associate external shame with failure to meet group expectations, while internal shame relates to negative internal information processing (Arnink, 2020).

There is a need for clarification between stigma and shame as they are often used interchangeably. Erving Goffman defined *stigma* as an “attribute that is deeply discrediting” (1963, p.3). According to Goffman (1963), stigma is utilized to disgrace or discredit an individual from being considered acceptable in the group, – and it makes stigma related to the definition of external shame. In addition, some scholars identify shame based on negative self-evaluation as self-stigma (Luoma et al., 2008), – and this term overlaps with the definition of internal shame. Some scholars (Bennet et al., 2015; Carmack et al., 2018) suggest that shame is a primary emotional response to stigma, whereas stigma is a formed attitude to others and selves.

Scholars have explored shame and stigma based on gender, age, race, and other characteristics. Women are considered vulnerable to shame due to the socio-cultural demands related to body image, sexuality, motherhood, professional identity, and a variety of other factors (Brown, 2006). Nonetheless, men can also be victims of stigma and shame; for instance, this has been associated with their perceived inability to meet societal expectations about traditional masculinity (Jakupcak et al., 2005). Harper and Arias (2004) found that women tended to react to shame with internalized responses (i.e., depression), while men were more likely to respond with externalized responses (i.e., anger). In addition, the vulnerability to shame can decrease from adolescence to adulthood and may subsequently increase again in older age (Harper & Arias, 2004).

Researchers have navigated stigma and shame in a variety of social settings. Arnink (2020) hypothesized that because shame is normalized in collectivist societies, people there have better

coping strategies than those in individualistic surroundings. However, Arnink (2020) found no significant correlation between collectivism and shame resilience. Scholars have likewise become interested in how representatives of certain professions manage shame, e.g., office workers (Lane, 2020), early career faculties of different nationalities (Guillaume et al., 2020), female entrepreneurs (Toth, 2021), and counselor trainees with eating disorders (Dayal et al., 2015).

Some researchers have examined specific social issues and how affected individuals overcome feelings of shame. In her research, Ryan-DeDominicis (2020) suggested that homeless people might stop using social services if they feel ashamed during their interactions with care providers, whereas incorporating shame resilience and empathy in the clinical practices can lead to positive changes. Roelen (2019) questioned if social assistance provoked stigma and shame among receivers in low-income countries. She found that both positive and negative effects co-existed. Stotz et al. (2015) conducted a study on refugees in Germany. They determined that asylum seekers' exposure to multiple traumatic events exacerbated the risk for mental health due to shame and guilt.

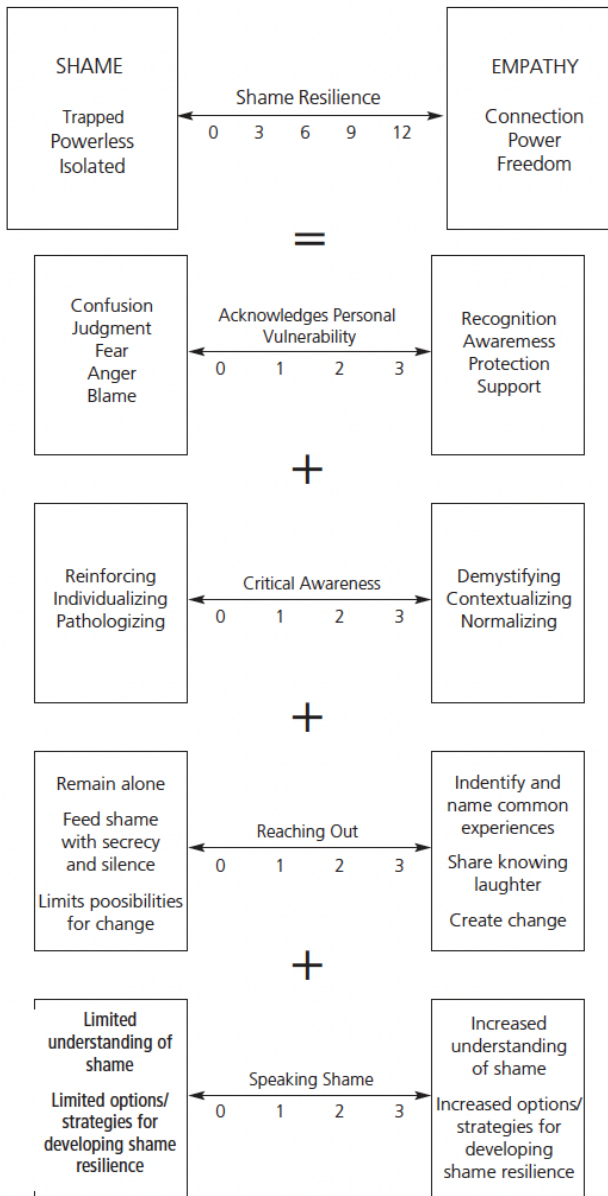
Stigma towards others and shame experienced by survivors has been a primary interest of research about abusive behaviors such as bullying (Ahmed & Braitwaite, 2005), family abuse and violence (Hoglund & Nicolas, 1995), and sexual assault (Vidal & Petrak, 2007). For example, Ahmed and Braithwaite (2005) uncovered that children who acknowledge shame (accept responsibility and make amends in behavior) and displace less shame into anger and blame of others reported less bullying at school. Meanwhile, forgiveness was considered an effective recovery technique. In addition, public stigma was considered an inhibitor that prevented women from reporting intimate partner violence and seeking help (McCleary-Sills et al., 2015). The

following chapter will discuss a central theory explaining the mechanism of overcoming shame and stigma.

Shame Resilience Theory

Shame is “one of the most primitive and universal of human emotions” (Brown, 2006, p.43). It is associated with unworthiness, humiliation, devastation, lack of trust, diminishment, and rejection. Individuals who experienced shame reported feelings of being trapped, powerless, and isolated (Brown, 2006). A metaphor of the Shame Web proposed by Brown (2006) illustrates that shame appears due to the inability to meet conflicting and competing expectations about whom an individual is “supposed to be.” In other words, shame is a psycho-sociocultural construct that involves personal, interpersonal, and cultural factors (Brown, 2006, p.45).

In her grounded theory study, Brown (2006) interviewed 215 women to learn about the impact of shame and strategies to overcome its negative consequences. The proposed Shame Resilience Theory (SRT) suggests that though shame as daily human emotion is unavoidable, some techniques might help to be resilient in the face of it. Brown (2006) described four components that increase the resilience to shame. First, this includes *the ability to acknowledge and accept personal vulnerability* and distinguish shame together or separate from other feelings such as fear, confusion, anger, or blame. The second component is *critical awareness*, or the ability to evaluate social expectations – analyze if they are attainable and reflect personal experiences. The third element is *reaching out* – recognizing private struggles as universal and seeking empathy and support from others. The final element is *speaking out* about shame – developing fluency in the language of shame and openly discussing personal issues with others. Altogether, these components build *empathy, connection, power, and freedom* as a continuum opposite to shame.



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Figure 1: Shame Resilience Theory

Brown suggested that SRT can be utilized in a variety of practical settings. Together with Hernandez and Villarreal (2011), she proposed a 12-session psycho-educational curriculum based on SRT targeting various populations, including psychiatric patients, high school students, substance abuse clients, and criminal offenders. SRT is now the only comprehensive theory on

shame and shame resilience (Bendure, 2014). It has become increasingly common in psychological well-being studies. A massive body of research is dedicated to the use of SRT in threatening *mental health* issues such as depression (Alvarez, 2020), anxiety (Fergus et al., 2010), psychosis (Martins et al., 2019), intellectual disabilities (Clapton et al., 2018), post-traumatic stress disorder (Saraiya & Lopez-Castro, 2016), substance abuse (Luoma et al., 2008), among others. In addition to well-being studies, there is an existing scope of work about shame resilience in culture and society (see, e.g., Farrel, 2011; Mayer et al., 2021).

Though the relationship between shame and mental illnesses has been explored extensively, the effect of shame and shame resilience on *physical health* has been given less attention. Trindade and her colleagues (2019) stated that patients with inflammatory bowel disease with high self-criticism tended to have more severe depression symptoms exacerbating their physical condition. Stigma and shame also predicted worse physical health among patients with such stigmatized diseases as HIV. In a 9-years longitudinal study, it was found that individuals who were particularly sensitive to social rejection due to their homosexual identity demonstrated poorer immunological responses, faster developed AIDS, and faster died (Cole et al., 1997).

This thesis explores how shame can influence the well-being of patients with anorectal diseases. The stigma associated with these type of diseases can impede the interaction of patients with healthcare providers, increase delays in seeking help, and pose challenges to dignity during medical procedures (Yue, 2021). Shame resilience theory states that via vulnerability acknowledgment, critical awareness, reaching out, and speaking out, individuals can resolve their main concerns regarding the impact and consequences of shame and ultimately improve health outcomes. The following chapter will address the benefits of the network of social recourses as an additional recovery strategy.

Social Support in Online Communication

Social support has long been associated with better mental and physical health outcomes and has been deemed to be particularly important as a stress-coping strategy (Cohen & Wills, 1985). It is “a network of family, friends, neighbors, and community members that is available in times of need to give psychological, physical, and financial help” (National Cancer Institute, 2022). There are five dimensions of social support: informational, tangible, emotional, esteem, and network support (Cutrona & Suhr, 1992). The dimensions of social support, as Cutrona and Suhr (1992) outline, are described in further detail as follows. The *informational support* includes suggestions, advice, referral to the source of help, information how to deal with the situation. Next, *tangible support* tends to be something that can be shown, touched, or experienced. This could include money, a responsibility taken over from the person in stress by the supporter, time spent together in action that reduces the stress, or even just willingness to help. Following this, *esteem support* is often expressed in the form of a compliment, relief of blame, or approval of the recipient’s perspective. Next, *network support* manifests by introducing a person in stress to a new social circle and connecting with other people. Finally, the role of *emotional support* includes a broad range of feelings and actions, such as closeness, love, empathy, attentive listening, promise of confidentiality, encouragement, prayer, and physical contact (such as hugs, kisses, shoulder patting, and others).

Considering these dimensions of support (Cutrona & Suhr, 1992), individuals establish, join, or merely *watch* support groups to share personal experiences and feelings, find information, get advice, and have a sense of belonging. With the rapid expansion of the Internet and computer-mediated communication developments, more people have become engaged in online support

communities. The advantages of online support groups must also be considered, given that the present study examines stigmatized illness and shame (Hong et al., 2012; Uden-Kraan et al., 2012).

The *first* group of advantages comes from practical conveniences due to technological affordances. Members can access their online communities non-stop, 24 hours a day, seven days a week. Participants can communicate with others without spending time commuting, which is a particular benefit to those who suffer from illnesses that might already have barriers. Co-presence is not required, and the interaction of participants can be asynchronous. The number of online community members is potentially unlimited.

The *second* group of advantages relates to psychological affordances facilitated by a computer-mediated environment. Online communities encourage a more heterogeneous mix of population – not only in terms of demographic characteristics (age, gender, race, socio-economic status) but also expressed in different perspectives, feelings, and experiences (Coulson, 2005). It contributes to a richer exchange of ideas and knowledge. Moreover, an online community might be the only venue to connect with others who experience the same issue if the disease is uncommon or rare. And, the absence of physical presence allows people to express themselves and discuss tabooed issues freely. It is especially crucial in the context of embarrassing and stigmatizing conditions. A study conducted by Davison et al. (2000) showed that online support groups proliferated if the health issue was considered sensitive. Anonymity possible online leads to greater self-disclosure, which in turn gives mental and emotional relief (Rains, 2014). Also, the therapeutic value of writing is one of the positive outcomes of online venues: by composing the text, patients can reach catharsis (Smyth et al., 1999). For those individuals who are not ready to share their

personal experiences and feelings, computer-mediated communities offer the solution known as “lurking” (reading without participating).

The *third* range of benefits is social. Online communities can empower individuals, allowing them to serve as advocates for their health and hold up each other. Such groups, of course, serve other functions in a multifaceted capacity. They may raise concerns as well as aid public institutions, international organizations, and businesses in establishing better health care policies and practices. They can also lead or participate in health education and health promotion campaigns (Feenberg et al., 1996).

There are *drawbacks* to communication surrounding social support in online communities. Online messages can be easily misinterpreted despite the broad use of visual and graphical cues – for instance, via emojis (Galinsky et al., 1997). Also, the lack of physical presence may contribute to the relatively impersonal nature of virtual communication and a lower social capital compared to real-world interaction (Parks & Floyd, 1996). Moreover, anonymity and greater self-expression can disinhibit some members of online communities who can harass other members (Galinsky et al., 1997). Last, members within online communities might share inaccurate and unchecked medical information. If online communities are poorly moderated, the risks of harm to the member’s health are higher (White & Dorman, 2001).

This chapter discussed five types of social support: informational, emotional, tangible, esteem support, and network support. Practical convenience, psychological affordances, and social benefits encourage users to facilitate social support online. However, online communication has certain drawbacks, such as the potential spread of inaccurate information and aggression. The following chapter will address how social support interplays with a complex construct of humor.

Humor and Social Support

The previous chapters overviewed shame resilience and social support as ways to enhance well-being. Humor, along with them, has been regarded as an effective coping strategy (Martin et al., 2003; Berk, 2015). A study conducted by Maiolino and Kuiper (2016) suggested that even brief humor exercises have an immediate beneficial impact on perceived happiness. The positive implications of humor on mental health are well documented. Humor reduces stigma among people with mental illnesses (Corrigan et al., 2015), attenuates depression (Tsukawaki & Imura, 2021), and improves learning abilities (Savage et al., 2017). In the area of physical health, humor may strengthen immune responses (Lefcourt et al., 1990), mitigate pain (Stuber et al., 2009), and reduce blood pressure (Eshg et al., 2017). However, in the long run, the influence of humor on health is less clear. Kerkkanen, Kuiper, and Martin (2004) conducted a three-year longitudinal study and found no link between humor, physical health and workplace well-being among Finnish police officers. Kuiper and Nicholl (2004) differentiated actual physical health and perceived physical health. According to them, humor contributed to a more positive perception of personal health, such as less fear of death or less health concern, but not to the actual health. Dyck and Holtzman (2013) further supported this hypothesis, demonstrating that cheerful humor was associated with fewer somatic symptoms.

Not all humor leads to better health and well-being, however. The Humor Style Questionnaire developed by Martin et al. (2003) differentiates two adaptive and two maladaptive humor styles that lead to different outcomes. The adaptive types make it possible to connect with others through funny comments and amusing banter (*affiliative humor*) or to bolster selves by finding humorous, positive aspects of everyday life (*self-enhancing humor*). By contrast, two other

humor styles are used to ridicule and disparage others (*aggressive humor*) or connect with others by derogating the self (*self-defeating humor*). Several studies have demonstrated that affiliative and self-enhancing humor styles are generally associated with enhanced mental and physical health outcomes, whereas self-defeating humor is associated with worse health outcomes (Fritz, 2020b; Schneider et al., 2018). The relationship between aggressive humor and health outcomes have been found to be found weak or inconsistent (Kuiper, 2012).

Scholars have linked humor with social support. Studies have demonstrated that affiliative and self-enhancing humor improves interpersonal relationships and thus, increases social support (Kazarian, Moghnie & Martin, 2010). Self-defeating humor is associated with low social support and higher isolation. Aggressive humor, again, has weak and inconsistent relations with negative social interactions.

Some studies have shown that social support mediates the association of humor with psychological well-being (Fritz et al, 2017) and life satisfaction (Zhao et al., 2014). For example, Dyck and Holtzman (2013) found that affiliative, self-enhancing, and self-defeating humor styles were linked to well-being, and this relationship was mediated by perceived social support; meanwhile, aggressive humor was unrelated to social support. Fritz (2020a) replicated this study and supported the idea that the relationship between health and well-being is indirectly mediated by social support. However, her study linked aggressive humor with more significant psychological distress and health problems.

In summary, this chapter described the coping capacity of humor and its positive influence on mental and physical health. Four types of humor, two adaptive and two maladaptive, were

considered after that. Research shows that social support combined with one of the two adaptive humor style can contribute to positive health outcomes.

Shame Resilience, Social Support, and Humor in the Context of Hemorrhoids

Shame and humor are opposite emotional responses. Shame, as maladaptive emotion, discourages people from seeking professional help and sharing their experiences with others. Thus, it leads to the deterioration of health conditions and mental issues (Yoon, 2015). In contrast, humor helps patients externalize shame, break down emotional barriers, re-establish shameless identities, and bond communities of patients (Yue, 2021).

Scholars have been interested in how people with specific diseases interact in the communities of patients and utilize humor as a coping strategy. There are two distinct paths that researchers tend to examine. The first path is primarily associated with discovering functions that humor serves to destigmatize diseases. For example, Chapple and Ziebland (2004) conducted in-depth interviews with men having testicular cancer. The participants reported using humor to manage their feelings, challenge public stigma around the disease, connect with others, and promote screening and seek medical help. Oliffe et al. (2009) studied prostate cancer support groups in the UK and found that the participants used humor to foster inclusiveness, establish boundaries, and reconsider traditional ideas of masculinity. Black (2012) analyzed communication in a gospel choir among South Africans living with HIV. According to him, members made jokes about their conditions to address complex issues of danger and death, recognize one's humanity despite the stigmatized disease, accept their HIV-positive status, and reinforce membership in the choir while separating from non-choir members.

Another common research path is associated with identifying different themes in communication within support groups. For example, Pitts (2004) recognized themes of women's empowerment, solidarity, and reassessment of femininity and beauty norms in online breast cancer communities. Yue (2021) distinguished four main themes in an online group of patients with anorectal disease: understanding shame events, normalizing them, shifting priorities from the illness to recovery, and transforming shame into pride. Her qualitative analysis of the prevailing narratives in a Chinese online community has been the major study that puts anorectal disorders in a context of shame, humor, and social support.

This thesis continues to explore the communication of patients with anorectal disorders – the domain that needs specific research attention. The most common disorders include hemorrhoids, anal fissures, abscesses, and anal fistulas. Although anorectal disorders, especially hemorrhoids, are widespread conditions, they are highly stigmatized physical health issues (Foxx-Orenstein et al., 2014). Some patients delay their visits to doctors because they feel ashamed of medical examinations (Yang, 2014). They are less likely to discuss their conditions with their friends and family members as anorectal illnesses are considered taboo in most societies. Stigma and embarrassment associated with them make it highly likely that patients would seek information and support online. Thus, online communities play an essential role for people with hemorrhoids and other diseases.

Shame resilience theory proposes that individuals can reduce the effect of shame if they would practice four resilience steps known as continuums: 1) acknowledge personal vulnerability towards shame; 2) develop critical awareness; 3) reach out to others; and 4) “speak out” about shame (Brown, 2006). The *vulnerability continuum* represents the ability to recognize personal

feelings such as confusion, fear, judgment, anger, and what drives these emotional responses. When personal vulnerability exists but is not acknowledged, individuals might be overwhelmed by their feelings. When individuals having anorectal disorders first approach online communities, they might see those other users openly express their feelings. It, in turn, helps them recognize their vulnerabilities. Humor helps to break down emotional barriers and make patients more reflective.

Second, the *critical awareness continuum* means the ability to put the personal experience into a bigger societal context. It implies being conscious of societal expectations and critically assessing them. By externalizing shame, an individual can stop being a victim of collective pressure. Humor helps to challenge negative public perceptions. In online communities, members deconstruct and normalize their experiences through connections with supportive others who have similar experiences. This process empowers them and makes them more resilient to stigma.

Third, the *reaching out continuum* is based on the ability to build a mutually empathic relationship with others. Shame cuts off the feeling of acceptance and belonging in standard settings but getting social support from the members of online communities increases their shame resilience. Users of online communities about hemorrhoids share their struggles, give each other advice, and bolster the courage.

The last, the *“speaking out shame” continuum*, advocates for fluency in shameful topics like health conditions. Online support groups are crucial venues where personal stories allow patients to break the silence around the disease and normalize it. Also, members of such community can develop a common language that could empower them.

To conclude, shame can have a toxic effect on human well-being by affecting mental health and deteriorating physical symptoms, damaging interpersonal relationships, and leading to isolation from society. Individuals who suffer from such stigmatized diseases as hemorrhoids might find psychological relief in online communities rather than in real-world interactions due to the convenience and anonymity of the computer-mediated environment. From the perspective of Shame resilience theory (Brown, 2006), the users in those online communities might acknowledge their vulnerability, develop critical awareness and fluency in talking about their anorectal disease. Social support is a valuable aspect of resilience to shame. Humor can be one of the additional means to overcome this negative emotion.

Research Questions

The purpose of this thesis is to focus on how individuals with hemorrhoids and other anorectal disorders get empowered by developing resilience to shame, facilitating social support, and using humor. It also aims to understand what common narratives and themes circulate inside online communities. Knowing such user conversations might help better understand the challenges and responses associated with hemorrhoids.

This thesis poses following research questions:

RQ1: What themes surrounding resilience emerge in an online community dedicated to those suffering from hemorrhoids?

RQ2: How do individuals in a community dedicated to those suffering from hemorrhoids make sense of the disease through (2a) shame, (2b) social support, and (2c) humor?

METHODS AND RESULTS

This thesis aims to understand the online conversation within the communities of users suffering from anorectal disorders. It is essential to know how they make sense of their disease through social support, shame and humor. In addition, the thesis examines the dominant themes associated with resilience that occur in the online conversation.

Data Collection

This thesis focuses on the conversation of a community of individuals on Reddit. Being among the seven most-visited websites in the US (Alexa, 2022), individuals participating in health or medical subreddits might seek advice and discuss sensitive issues using a pseudonymous account. Created in November 2013, *r/hemorrhoid* is the most popular subreddit associated with anorectal disorders, comprising 3.5k members (as of April 2022) – self-described patients and non-experts. This subreddit positions itself as a place “for informal second opinions and casual information.” The moderators advise its members to use the community as a source of information but always visit a medical provider for health advice.

Posts and comments from the *r/hemorrhoid* subreddit were collected through Sprinklr (2022), an enterprise social media data-mining analytical software. 10,000 submissions were selected randomly between April 1, 2021, and April 1, 2022. Data collection included titles, submission texts, and comments.

Study 1 Method

Data Analysis through Leximancer

To address RQ1 (What themes surrounding resilience emerge in a community dedicated to those suffering from hemorrhoids?), the data collected from the *r/hemorrhoid* subreddit was analyzed using Leximancer 4.5 (2017). Leximancer is a text analytics approach that computationally identifies themes and concepts (Smith & Humphreys, 2006). It results in visualization and interpretation of large corpora of the text data (Sotiriadou et al., 2014). According to Smith and Humphreys (2006), a major goal of Leximancer is “to make the analyst aware of the global context and significance of concepts and help to avoid fixation on particular anecdotal evidence, which may be atypical or erroneous” (p. 262). Leximancer is increasingly utilized across a range of disciplines, including social sciences, tourism management (Tseng et al., 2015; Chiu et al., 2017), operations management (Kim & Kim, 2017), psychology (Cretchley et al., 2010b), and health communication studies (Baker & Watson, 2020). The effectiveness of the use of Leximancer for larger corpora has been demonstrated in the credibility and validity of qualitative research (Lemon & Hayes, 2020). Researchers can track the evolution of discourse over time by visualizing and comparing concepts and schemes in different periods (Britt et al., 2020).

Prior to the data analysis, all posts and comments were uploaded on Leximancer. There were two stages of extraction to interpret data – semantic and relational. In the semantic extraction stage, the software identified frequently occurring words throughout the text and treated them as concepts. A thesaurus was created based on how often these concepts co-occur in the text. Concepts that were irrelevant to the study design (e.g., “due”, “during”, “of”) were removed, and similar concepts (e.g., “day” and “days”, “pregnant” and “pregnancy”) were merged. These stop-

words with low semantic loads would not make sense of the data but may have an unwarranted influence on the analysis, whereas the cognate words would excessively flood the concept map (Smith & Humphrey, 2006). To enhance internal validity and reliability, a researcher with expertise in this domain (an academic advisor) was involved in decision-making at every step of the data clearance. Concepts were removed or merged after a consensus between the two researchers was reached.

In the following relational extraction stage, Leximancer coded concepts, re-examined their occurrence, co-occurrence, and relational co-occurrence, and created a concept map. Concepts that co-occur frequently attract each other – thus, they settle nearby (Smith & Humphreys, 2006). Clusters of tightly related concepts represent themes. Themes are automatically named after the most prominent concept, but the researcher can rename them if needed.

The resulting concept map visually represents a semantic structure of data and the strength of the concept association (Cretchley et al., 2010a). A researcher can manipulate the visual representation of the data, changing the theme size or rotating the map – but the relative position of concepts and themes to each other remains the same. The brighter the color of a theme, the more prominent the theme is as they appear in a rainbow spectrum from red (most prominent) to orange, yellow, green, blue, indigo, and violet (least prominent). The more concepts appear within a theme, the greater the meaning of this theme. However, the size of themes does not reflect their importance (Leximancer, 2021).

Study 1 Results

A Concept Map: An Overview

In the initial omnibus concept map, eleven distinct themes that reflected community discourse emerged. These themes were *time*, *hemorrhoids*, *weeks*, *bad*, *better*, *doctor*, *post*, *pregnancy*, and *water* (Figure 2).

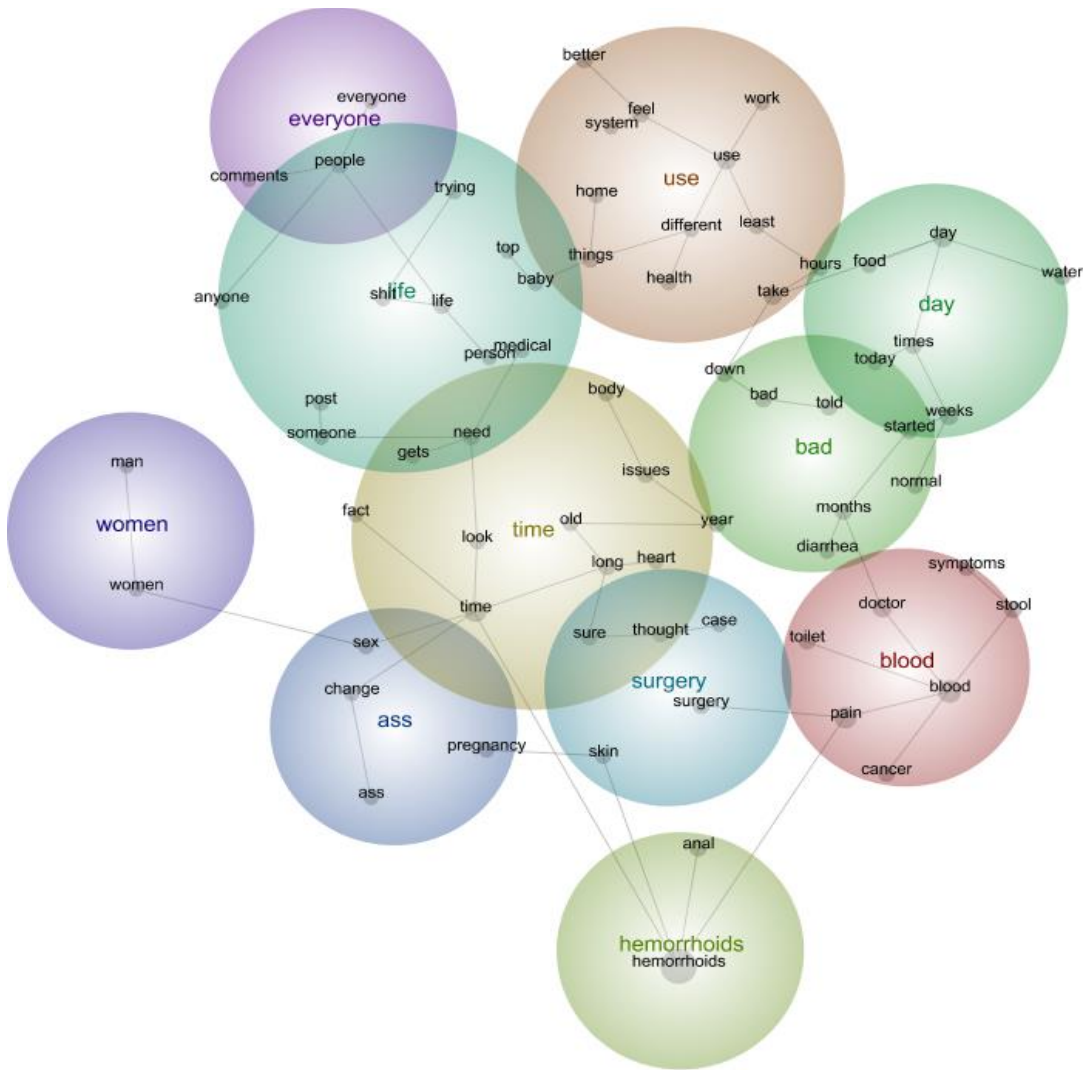


Figure 2: Leximancer concept map indicating the structure of themes and concepts in *r/hemorrhoid* subreddit

Their relative importance, determined by the number of concepts present in the theme, was displayed in the color spectrum from red (the most important) to violet (the least important) (Leximancer, 2021). *Blood* (a red-color bubble) was the most prevalent theme that gathered the highest number of interconnected concepts. In comparison, *hemorrhoids* (a bright-green bubble) were not the dominant theme, with fewer related concepts. In addition, the theme *hemorrhoids* was asymmetrically detached from the other themes on the concept map. Such a position states that its concepts co-occur with other concepts the least frequently (Leximancer, 2021). It likely speaks to the nature of the community: people knew what the community was about, so they did not need to mention their illness when they discussed symptoms, issues, and temporal features that affect life.

Leximancer also provides statistics about how many text excerpts (hits) match each concept. Unsurprisingly, *hemorrhoids* were the most commonly used concept, having as many as 13,151 mentions in the data set (Table 1).

Table 1: Top-20 the most frequent Leximancer concepts indicating the concept title, thematic cluster(s) for which the concept is relevant, frequency of occurrence, and a representative example.

Concept	Thematic cluster	Freq.	Example
hemorrhoids	Symptom Disclosures	13,151	Honestly? With the epidural, the hemorrhoids I'm experiencing now hurt less than my actual child birth did.
blood	Symptom Disclosures	2,909	No. Jorrell is not right. Red blood in your poo means that you have bleeding in the last foot or so of intestinal tract/ rectum.
pain	Symptom Disclosures	2,817	How to cope with the pain after hemorrhoidectomy?

time	Symptom Disclosures/ Routine Practices/ Community Participation	2,384	So technically, I should be symptom free in some time?
day	Routine Practices	2,038	I went to get my scope done and passed out in the parking lot. The ambulance took me to the hospital where I was admitted for ten days.
use	Routine Practices	1,888	The bath causes inflammation? So use ice?
doctor	Symptom Disclosures/ Routine Practices	1,795	So dont wait and go to a doctor. Dont just go to any doctor.
weeks	Routine Practices	1540	You will lose a lot of weight within the first week. After that, you probably won't care as much about your weight as you think you will.
feel	Routine Practices	1,404	But I will feel shaky/ jittery when it comes back. Sometimes it's like a fuzzy/ tingly sensation.
take	Routine Practices	1,376	He refuses to take pills and will urinate everywhere if we try to get him to take them. He is a sweet boy, but unruly if he's picked up or handled in any way.
bad	Symptom Disclosures/ Routine Practices	1,230	I'm definitely not suicidal but im highly depressed and im just scared of the next steps. How bad is it?
stool	Symptom Disclosures	1,167	Definitely recommend stool softeners or fiber supplements and don't be scared to tell your doc.
need	Routine Practices/ Community Participation	1,124	Hope I don't need a prescription.
people	Routine Practices/ Community Participation	1,208	I don't know how common that is. I have heard of a few people who have it here on this subreddit though.

water	Routine Practices	1,072	I've always eaten well, I drink a ton of water, I exercise a lot. I'm so sad and desperate so pls anything could help!
anal	Symptom Disclosures	1,018	Yeah, I was considering that. I was looking up anal pressure and it mentioned prostate
life	Routine Practices/ Community Participation	1,009	For 5 years, they have been recurring in my life. I do everything I'm 'supposed' to do.
toilet	Symptom Disclosures/ Routine Practices	981	Never sit on the toilet seat and grunt out poops. Lift up the toilet seat, straddle, stoop, and then poop.
long	Symptom Disclosures/ Routine Practices	953	Avoid long periods of sitting.
things	Routine Practices/ Community Participation	915	Out of the hundreds of possible things, chances are a handful will happen but who knows which!

The most central themes help to differentiate overarching, broader thematic clusters that guided the conversation. For this purpose, a theme size was increased, and, under this manipulation, the less important themes were combined, eventually comprising three dominant themes: *hemorrhoids*, *time*, and *people*. These themes were renamed, giving way to three thematic clusters: *Disclosure of symptoms*, *Routine practices*, and *Community participation* (Figure 3). These overarching themes will be discussed below to address the RQ1.

located at the intersection of these two clusters described health conditions (*symptoms, issues, diarrhea, heart*), whereas others captured the dynamic character of the disease and recovery from it (*months, started, normal, today.*) (Figure 3).

The first appearance and self-introduction of a user in this subreddit typically were accompanied by the description of their own conditions that led them to come to *r/hemorrhoid* and engage in conversation. Consider this post:

Hi, I am a 24-year-old female and I have been suffering from external & internal hemorrhoids for about 2 years already. Last year my hemorrhoids bled so much that I ended up becoming anemic with a hemoglobin of 6! I had to get a blood transfusion urgently and an iron infusion. Of course my period also contributed to that but more than anything I would feel weaker each time I bled when using the restroom.

In this quote, the highly descriptive language helped the user to illustrate the gravity of the issue involving bleeding, being anemic, and having a blood transfusion. Besides the highly illustrative, naturalistic character of this thematic cluster, it also tended to be anecdotal: many posts represented a compelling story on how and when the illness started, what symptoms accompanied it, and what treatment methods were used. The pseudonymity on Reddit could potentially disinhibit such revelations. *Blood, pain, diarrhea, cancer, and surgery* were among the concepts that accumulated the traumatic experience of living with hemorrhoids. Less commonly, such vivid descriptions of physical hardships were accompanied by a picture of psychological distress. One patient wrote:

Every single day for months, I've woken up with awful anxiety. I wake up before my alarm and immediately my heart is racing, skipping beats, and my stomach cramps up. I immediately have the urge to poop. I get diarrhea every day, multiple times a day from the anxiety. That has cause hemorrhoids. I lose my appetite, everything sounds gross and trying to eat makes me gag.

Most users had some basic knowledge about the specifics of this disease, e.g., the difference between external and internal hemorrhoids. "I've always had a problem with internal

ones but this time I got external ones and they hurt like a bitch.” In this comment, a user assumed that their respective audience had a clear idea about these two types of hemorrhoids.

Cancer was one of the crucial concepts in the thematic cluster *Disclosure of symptoms*, closely related to the concept *hemorrhoids*. Although hemorrhoids and colon cancer do share some common symptoms, it is recognized that the former does not lead to the latter (Williams, 2022). However, these two concepts got strongly connected on the concept map as patients constantly attempted to differentiate one disease from another. As a treatable illness, hemorrhoids themselves have no life threats compared to colon cancer. Some users expressed great concern that their symptoms might be more severe than just hemorrhoids; others shared their personal stories stressing the difficulty of differentiating symptoms and casting doubt on the doctors’ expertise:

This happened to my dad. He was told over and over again he had hemorrhoids. That ridiculous amount of blood? Hemorrhoids! you must be fine! By the time the specialist (to whom he was referred for hemorrhoid surgery) found it, it was stage 4, inoperable, and in his lungs and liver. He died a few months later. I wish I knew those doctors names so I could give them the phone call of their lives.

Criticism towards health providers, as in the quote above, was not a recurring sentiment. Rather, the concept *doctor* usually appeared when users described their unresolved concerns that were not addressed during their meetings with health care providers. Consider this example: “I received a message from my doctor last night that they got the biopsy results back, and that they indicate some inflammation, but that it's not clear at this point if it's infectious or chronic.”

Pregnancy is a concept worth mentioning, although its relative importance in the overall subreddit conversation was not high. The use of this concept was common among specific subgroup in *r/hemorrhoid* – pregnant women or women who already gave birth. The distinction of this subgroup might be explained by the physiological factor: many mom-to-be get hemorrhoids

in their third trimester because of increased blood flow to the pelvic area and growing fetus (Zielinski et al., 2015). “9 months pregnant with hemorrhoids and desperately worried about delivery. Please help,” – wrote one of the female patients. Commonly, women demonstrated solidarity with each other, providing emotional support and warning about the potential complications during pregnancy.

To conclude, the cluster *Symptoms Disclosures* comprised symptom-related concepts expressing patients’ self-revelations.

Routine Practices

Conversations about challenges patients met daily and about regular self-care were vital for *r/hemorrhoid*. First, as was previously mentioned, this thematic cluster, *Routine practices*, shared many symptom-related concepts with the cluster *Disclosure of symptoms*, such as *toilet, diarrhea, heart, doctor*, telling a story about the disease course. However, unlike the latter, the cluster *Routine practices* tended to contain the majority of temporal concepts (*today, day, times, weeks, months, long*), giving special dynamics to the conversation. Second, this thematic cluster was not only about the course of the disease but also about self-care and strategies for recovery that were presented in a transformative way. In the following example, a patient described both symptoms and recovery process with several temporal concepts (marked in italic):

Started using that, as well as any OTC (sic over the counter) remedy I could find (psyllium, stool softeners, witch hazel, etc). I also upped my fiber intake and water intake. They went away (at least stopped hurting/bleeding) shortly after I *started* all that, which was amazing. They flare up every once in a while, usually for a *day* or two and nothing horrible. But last *week* I had a stomach bug and didn’t have a BM (sic Bowel movement) for two *days* so afterwards I was super dehydrated and having a lot of trouble with BMs. Now my hemorrhoids are hurting SO badly, bleeding, I can barely walk around all *day* bc (sic because) I’m in so much pain. Yesterday I took a flight across the country and it was horrible, I couldn’t sit still or get comfortable bc (sic because) my ass was killing me.

In this story, such high saturation of the temporal concepts might be explained by the fast-changing nature of the disease and its recovery. Hemorrhoids are often a long-term disease, with symptoms that ease or get severe over time (Ganz, 2013). The treatments from hemorrhoids are generally well known, but their effects might provoke individual reactions, being more effective in one case and less in others (Ganz, 2013). Part of the concepts of this thematic cluster, such as *change, normal, bad, better, and different*, expressed a constant evaluation of personal conditions.

Hemorrhoids affect everyday life and change the daily routine. The concepts of *home* and *work* accumulated the adjustments that users made to tackle the disease. *Home* was a primary place where the patients observed specific symptoms and utilized remedies. *Work*, in contrast, was not related to a particular physical space or occupation but mainly was used as a verb in the meaning “to bring positive results” – and that is why it was connected with the concept *use*. Consider the following example: “Banding isn’t recommended for external hemorrhoids because of the pain. Banding only works for internal.” In the excerpts above, the users behaved proactively and prioritized recovery over merely sharing their traumatic experiences. When the users reported their mistakes in the past or shared their experiences about the routine practices that worked for them, they intended to give advice that would benefit other members of the online community. Such advice-giving and advice-seeking intentions aimed to provide social support to people with similar conditions and raise public awareness about certain aspects of the disease.

As part of their treatment, patients tried to correct their behavior in terms of dieting, exercising, and making new self-care habits. In *r/hemorrhoid*, such intentions were expressed via concepts of *food* and *water*. “Popcorn absolutely wrecks me even though it’s low fodmap because it’s so high in fiber. Be careful if you have hemorrhoids or anal fissures too – they can bleed from

the popcorn,” warned one of the participants of this subreddit. In another case, one user expressed regret: “TIFU by not just drinking water and giving myself hemorrhoids.”

In sum, the cluster *Routine practices* aggregated the information related to self-care, treatment, and daily routine.

Community Participation

The last thematic cluster, *Community participation*, comprised of the concepts that articulated online engagement with this subreddit as well with real-life events: *posts, comments, facts, life, need, people, man, and women*, among others. It was the least populated and least prominent cluster that had close ties with the central thematic cluster, *Routine practices*.

Complex concepts like *life, need, medical* were located at the intersection of these two clusters. They represented discussions at the broader philosophical level, sometimes going beyond mere talking about the disease: “Oh I do that too, I like a good book. Lately I've been into self-help books. Stuff about trauma, bad families, attachment disorder, how my mother messed up my future romantic life. Light reading lol.”

In another case, a user discussed a public issue that provoked their concerns even if it was off-topic of this subreddit:

Unfortunately, the mental health system in America is a dumpster fire. They don't manage to catch people who are dangerously out of touch with reality and can't tell ginger from an afghan, but my PTSD got me locked up on suspicion that I might maybe hurt myself because a county official saw an injury on my arm where I had tripped and fallen against a barbed wire fence.

These examples of off-topic conversations that “feed” into discussions showed how individuals make sense of the challenges by connecting with like-minded individuals. Such conversations reflected how users positioned themselves in reality and what challenges they faced

in different aspects of their lives. First, there is a potential ongoing macro-level conversation, with the exchange of opinions and experiences about life complexities. In addition, there is also a medical level conversation that goes beyond mere hemorrhoids topic.

Meanwhile, the participation *online* was reflected in the concepts such as *post* and *comments*. Often, they expressed a moderation policy in the subreddit. Rules are an integral part of the online community; they regulate the participants' interactions in the virtual environment. There is no uniform policy across Reddit – each subreddit has its own rules and moderators who decide what content is allowed to post (Gibson, 2017). *R/hemorrhoid* has a concise set of rules: (1) follow the Reddit Terms of Service regarding sharing explicit materials, (2) be respectful, and (3) limit the amount of off-topic posts. However, as everywhere across the platform, *r/hemorrhoid* moderators constantly censored the posts and comments published, as here:

Your comment was removed because of unverified response. Unverified users may not place top-level comments. You may respond to other comments, including the AutoModerator's first comment. If you are a healthcare professional, please become verified so that you can reply to posts as top-level commenter.

Several concepts spoke for the *subject* discussed: *people, man, women, someone, anyone*.

The last two concepts were mainly related to the situations when users sought advice: “Anyone know of resources for dealing with hemorrhoids (external)?” Notably, both genders were represented in the respective concepts and were closely located at the Leximancer map. Unsurprisingly, the concept of *women* was associated with *pregnancy*, and continued conversations about specific conditions women have at this time. The concept of *man* had diverse semantic meanings, from the reference to gender to human beings in general. Often, mentioning gender was part of self-introduction: “I'm a 21 year old woman and just learned the true size of a

uterus.” Sometimes users addressed the gender-specific audience, whereas in other situations they were engaged in discussions about gender differences. The following example served both functions: “It's notoriously worse for women, 23f (sic female) here. However ladies, it gets better over time.”

To conclude, participation in both – the offline community and online space – was effectively reflected in this thematic cluster. Its concepts aggregated the problems of society, as well as internal rules of the virtual community and the status of its members.

Study 2 Method

A Theory-Driven Content Analysis

A content analysis was a primary method to address RQ2 (How do individuals in a community dedicated to those suffering from hemorrhoids make sense of the disease through (2a) shame, (2b) social support, and (2c) humor?) This analysis followed Boyatzis's (1998) deductive, a theory-driven approach that is utilized when a researcher wants to use someone else's code as the basis for developing their own code. The codes are derived from the elements of theory. Thus, the anticipated meanings will be closely tightened to the theoretical framework. It differs from the inductive, or data-driven, approach that allows themes to emerge freely from data (Boyatzis, 1998). In this thesis, codes were based on four components of Brown's (2006) Shame resilience theory, Cutrona and Suhr's (1992) taxonomy of five types of social support, and four humor styles developed by Martin et al. (2003) (Figure 4).

Shame resilience theory,	Social support, 5 types:	Humor, 4 styles
4 components (Brown, 2006): <ul style="list-style-type: none"> • Vulnerability acknowledgment • Critical awareness • Reaching out • Speaking out 	(Cutrona & Suhr, 1992): <ul style="list-style-type: none"> • Emotional • Esteem • Instrumental • Informational • Network 	(Martin et al., 2003): <ul style="list-style-type: none"> • Affiliative • Aggressive • Self-defeating • Self-enhancing

Figure 4: The taxonomy based on Shame resilience theory (Brown, 2006), social support types (Cutrona & Suhr, 1992), and the 4 Humor Styles (Martin et al., 2003).

A Research Randomizer online tool (2022) randomly selected a subsample of 200 posts and comments (2%) from the previously collected 10,000 submissions. The next step was to develop a codebook rooted in theory. De-Cuir-Gunby et al. (2011) suggested a code definition be “written in a simple, straightforward language” (p.148). Each code label was conceptually refined and revised in the context of the online patient community. For example, *social network support* was defined as “helping to enhance one’s sense of belonging or offering to be there for others.” We also commented on how it might work in the context of the patients’ community: “It can also be social network sharing, such as recommendation of a certain doctor or clinic.”

A fellow graduate student interested in the health communication domain contributed to this research to ensure reliability. In October 2022, the first author conducted a training session with that graduate student under the supervision of an academic advisor, where they discussed code definitions and practiced coding. They also talked about the possibility of multiple coding and no coding. For instance, it was evident that *tangible support* (the provision of financial

assistance, material goods, and services) would, in most cases, rarely occur in the *r/hemorrhoid* subreddit due to the virtual nature of the online environment. Thus, not all codes would be relevant to the data. Also, the coders agreed to consider each submission independently from the original post and other comments without speculating about the missing context. For example, if a user asks the community whether their symptoms remind them of hemorrhoids, he or she might probably seek informational support. However, the coders can only assume that other users helped with their informed opinion but do not see it from this particular comment. Thus, the coders did not label this comment as evidence of informational support.

The next step was establishing the intercoder reliability. The employed qualitative data analysis software, NVivo 1.7 (2022), automatically calculated Cohen's kappa coefficient (Cohen, 1960). At the initial stage with the subsample of 32 submissions, NVivo showed poor interrater reliability, with Cohen's kappa 0.10. After that, the two coders conducted another session where they discussed code definitions and our justifications until we reached an agreement. The codebook was revised (see the latest version in Appendix). The following coding of 10 submissions showed substantial interrater reliability, with Cohen's kappa coefficient equal to 0.78 (Figure 5).

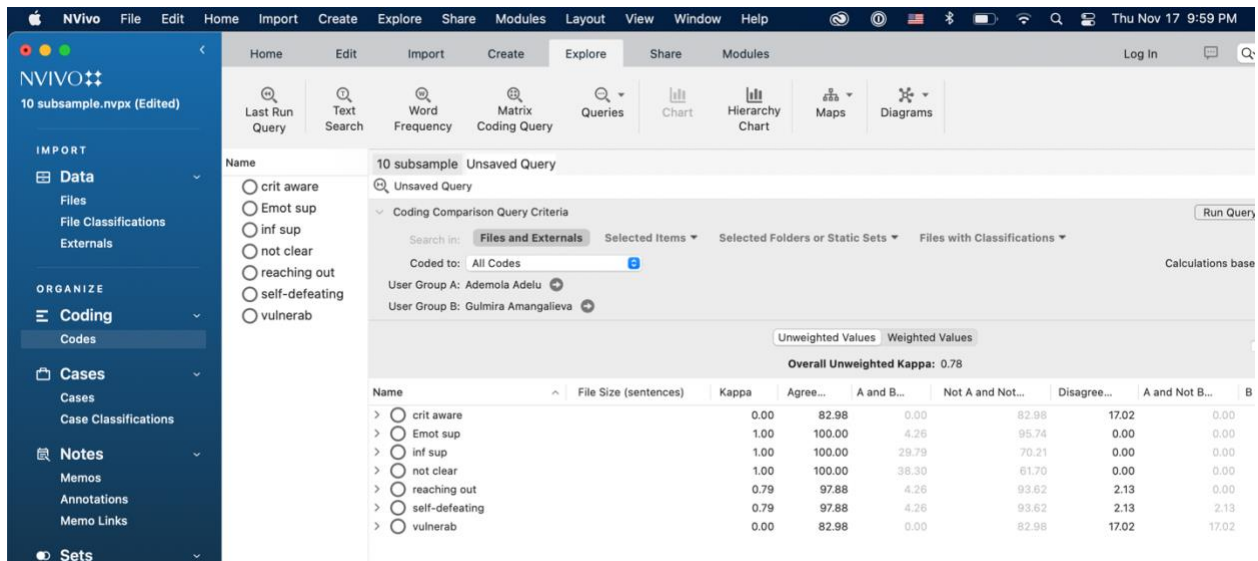


Figure 5: A screenshot showing the interrater reliability in NVivo

After achieving the substantial interrater reliability, all 200 submissions were coded. The resulting theory-driven codes aggregated different numbers of references to the data, with the apparent prevalence of informational support (Figure 6).

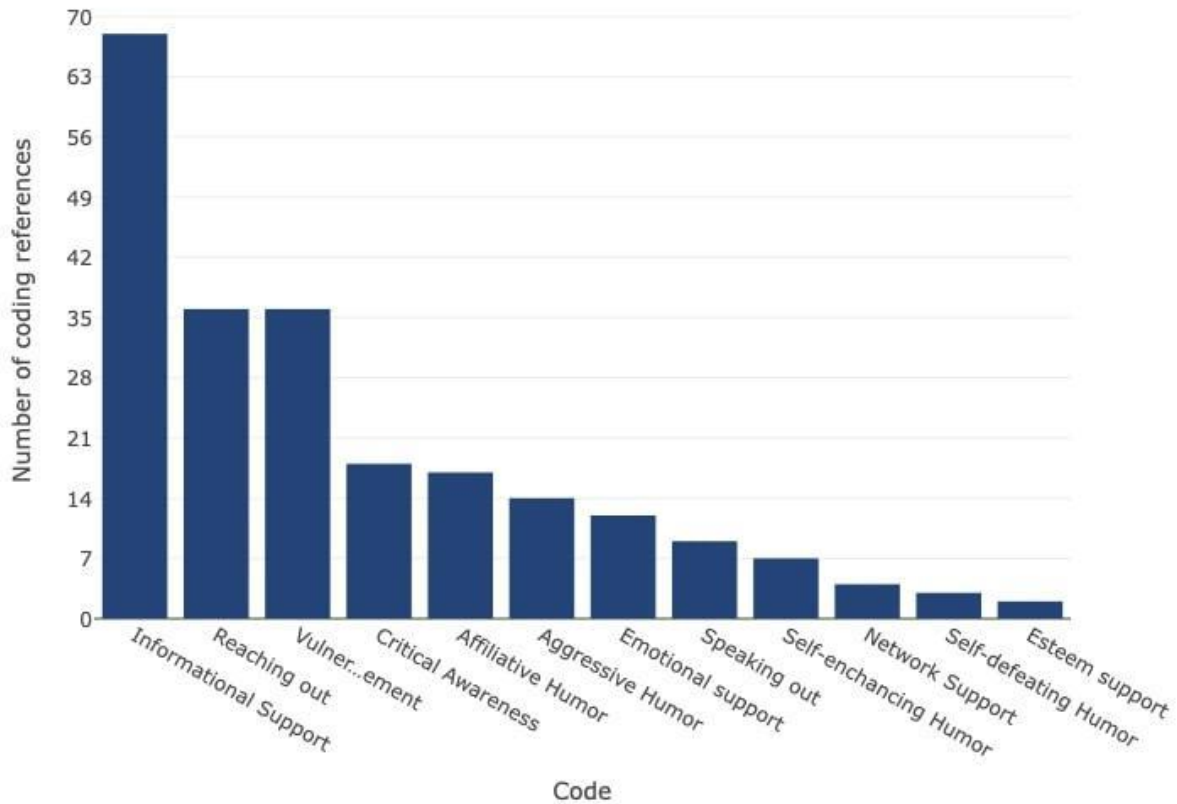


Figure 6: A chart representing frequencies of theory-driven codes in the r/hemorrhoid subreddit

Study 2 Results

BASE Model: An Overview

The next stage was the development of themes based on coding. In their reflexive thematic analysis method Braun and Clarke (2006; 2021) emphasize flexibility in the interpretation of patterns and the active role of the researcher. It appeared that many initial theory-derived codes appeared to be very broad, and several thematic subcategories emerged. For example, a code *vulnerability acknowledgment* (“the ability to accept personal vulnerability and recognize shame triggers” (Brown, 2006)) included text references with the ideas about fear of anorectal disease, physical suffering, mental distress, fear of seeking medical help, and shame

because of unwanted health behavior. Complex codes were broken into several logically emerging subcodes with the purpose to see their more precise meaning specific to the *r/hemorrhoid* subreddit. These codes, with their subcodes, were eventually merged into four themes that represented how patients make sense of their disease by going in a favorable direction of shame, resilience, social support, and humor: *Belongingness*, *Autonomy*, *Security*, and *Efficacy* (*BASE*). These themes were reviewed to ensure the extracts formed a coherent pattern. Each theme is discussed below (Figure 7).

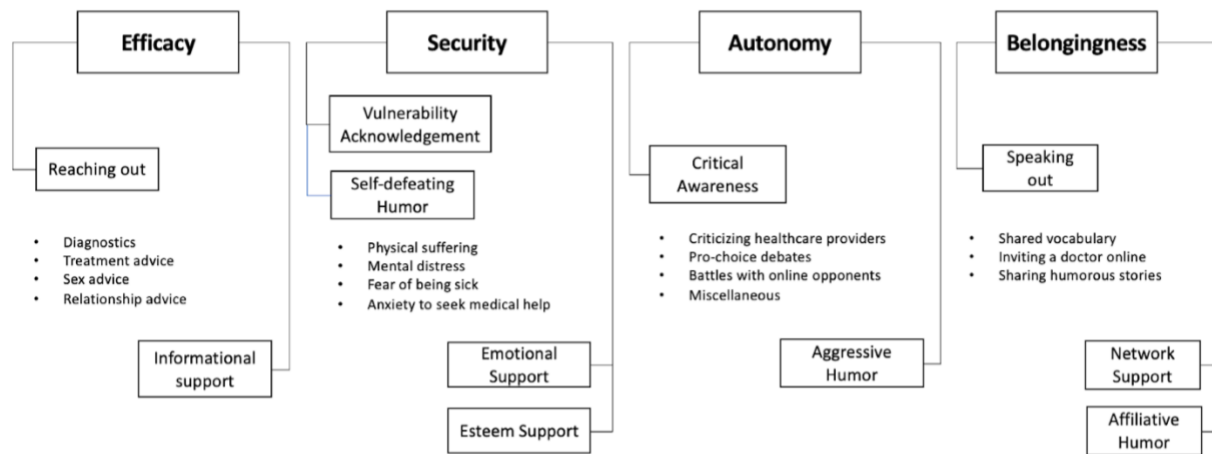


Figure 7: BASE – a thematic map of *r/hemorrhoid* based on theory by Brown (2006), Cutrona & Suhr (1992), and Martin et al. (2003)

Efficacy

Perhaps unsurprisingly, the principal reason patients referred to the *r/hemorrhoid* subreddit was seeking information or advice from their counterparts. The code categories that collected the maximum number of text references were *informational support* (29.14% coverage) and *reaching out* (15.59% coverage). The theme *Efficacy* emphasizes that participants shared

their experience and expertise to build a collective knowledge that would benefit everyone striving to recover.

First, *diagnostics* played an essential role in the community discourse. When a user witnessed any symptoms, they approached this subreddit to seek another opinion. Common concerns were: “is it normal?” “is it hemorrhoids?” “internal or external ones?” “is it a colon cancer?” A typical example is: “Have you ever had this much blood? Is this hemorrhoids or cancer ?” Users described in detail their symptoms and sometimes provided a picture of their body parts, labeling it with the abbreviation “NSFW” (“not safe for work”) to label this sensitive content. The benefits of online support groups are instant reactions. However, some risks might be associated with diagnostics not made by professional health providers.

Second, many advice-seeking and -giving interactions were related to the *treatment choices*. New users navigated their therapeutic way and sought recommendations, while more experienced users were willing to share their stories about helpful or useless remedies. The treatment suggestions could be traditional and untrivial, like this: “Horse chestnut cream is a miracle drug for hemorrhoids. I have them chronically due to gastroparesis/constipation, and it's my go-to solution.”

Third, some advice requests were related to the patient-provider interactions:
Should I ask my GI (sic gastroenterologist) for prednisone? She has me on Budesonide but it's not helping. I feel like this is exactly what I have, everything. I don't know how to ask for these things though. She's going to want me to finish the 10 days of the hydrocortisone cream first probably.

In this example, a user asked for advice on negotiating a treatment plan with their doctor – to request a medicine that might better help. It shows that this user was not satisfied with the top-down communication with their provider and wanted to play a more active role with the assistance of the online community.

Next, *sex* was a topic highly discussed. Because anorectal disorders affect intimate life, users felt the need to discuss sex questions that are taboo in real-life communication. In the example below, one user expressed their opinion on the question is sex life possible during severe hemorrhoids. One of the responses was:

I don't think you really come across hemorrhoids during sex. I've had 3 friends and/or coworkers who have gotten hemorrhoids (that I know of), and I've gotten the general gist that they were definitely avoiding sex while they suffered from the hemorrhoid. At the very least, they weren't spreading their cheeks and letting people look at their butthole.

Last, the advice exchange related to behavior and *relationships* at work, at home, and in public also appeared from the data. For example, one user considered themselves environmentally friendly and noticed their roommate used a lot of toilet paper. The author asked the group if it was good to separate the bathroom bills. One of the community responses was empathetic to the roommate discussed who might have been in a health situation similar to their own:

She might have a medical issue, and making drama over this can look really bad or make you feel like a dick. I have hemorrhoids myself and the blood with every poop definitely necessitates more than 7 squares. I'd hope no roommate would have a problem with the extra 40 cents on TP (sic toilet paper) to cover me not bleeding out my butthole all over everything.

In sum, this theme highlighted the disease-related information exchange. By being armed with knowledge, the participants of *r/hemorrhoid* executed greater self-efficiency to achieve recovery and healthier relationships.

Security

The next theme captures emotional security as a “feeling of safety, confidence, and freedom from apprehension” (“Emotional Security,” n.d.). It is a state that participants often lacked but desired, so they used the *r/hemorrhoid* subreddit to achieve it, thanks to their peers.

Participants explicitly revealed the disease-related struggles that made them feel vulnerable with the hope that other community members would support them emotionally.

The description of *physical suffering* from the disease and associated psychological distress was central to this subreddit. A typical response would be: “Hemorrhoids. I had first day of my first ever job. I thought I was going to die. Really were tearing me up.”

In other cases, users had not developed anorectal conditions but only noticed some symptoms. *The anxiety associated with a possible disease* brought them to the subreddit. Not only did they expect diagnosis and treatment advice from peers but psychological comfort and empathy:

First time I ever noticed blood in toilet was 10 years ago just after my pregnancy. It's happened a few times on and off. Not much. Just always thought it's hemorrhoids. But it has not happened for a while and this time I'm just floored with the what if aspect of it all. I'm honestly so done always being scared for my health. This is just not living. If it's not one thing it's the next. It never ends.

Users also expressed *anxiety about seeking professional help*. It was related to the embarrassment of medical examination, fear of severe diagnosis, or economic hardship:

[.] I'm so so so scared to find out it's something worse and the financial burden it will put on my family. Any comforting words? And advice on when I got to the doctors, I'm tired of being brushed off.

Regrets for negligent attitudes toward one's health and behavioral mistakes in the past were also prominent sentiments in the hemorrhoids' online discourse. In one example, a person realized that he or she earlier did not pay attention to medical procedures, resulting in deteriorating conditions. The user asserted: “You make some valid points. Now I'm scared AND mad.” In other cases, patients regretted the lack of physical exercises, unhealthy dieting, and not drinking enough water – common factors contributing to hemorrhoids (Ganz, 2013).

In response, community members were willing to provide *care, concern, and encouragement*. More experienced users served as mentors to the members feeling insecure. This excerpt illustrates how one commenter comforted a person who experienced fear of medical examination:

It might be embarrassing to you, but it's another day at the office for your GI (sic gastroenterologist). To them, it's no different than telling your mechanic what's wrong with your car. So yes, absolutely tell them everything, always.

Like in the example above, community members stimulated each other to take pro-health actions by using amusing words: “YOU GOT THIS!!!! FOR YOUR PRECIOUS BOOTY YOU CAN DO IT!”

To conclude, this theme depicts participants’ perceived need for emotional security. Community members explicitly revealed their physical struggles and disease-related psychological distress. Such social sharing of negative sensations and emotions aimed to release strong emotions and gain emotional relief, or catharsis (e.g., Pennebaker et al., 2001). Moreover, participants were rewarded for their revelations by the emotional and esteem support they got from their peers, and it helped them manage uncertainties regarding health and develop coping strategies (Goldsmith & Albrecht, 2011).

Autonomy

The following theme, *Autonomy*, highlights the need for community members to establish their independent individual agency and fight society’s unfair norms. It was expressed in a skeptical attitude toward health practitioners, support for reproduction rights, and confronting others inside and outside of the community.

In the previous two themes, the advice about negotiating treatment with doctors and apprehension about communicating with them were discussed. In this theme, patients further promote their autonomy by *critically assessing the technical competence and communication*

skills of medical personnel. Shared concerns were that doctors made inaccurate diagnoses or prescribed treatment that appeared to be ineffective. One user expressed the need for a more considerable attitude from the medical workers with whom she had interacted:

The visit was pretty unpleasant, not gonna lie, but this was mostly due to the attitudes of the dr (sic doctor) and nurse I saw. Both were kind of rude. I'm a 21 year old woman with PTSD so having an older male doctor stick his finger up my rear (without any warning, btw) (sic by the way) was pretty upsetting, lol. But he seemed very knowledgeable and has been a dr (sic doctor) for a long time.

Not only healthcare providers but also pro-life campaigners were targets for criticism of the *r/hemorrhoid* subreddit. Because hemorrhoids might develop during pregnancy along with other diseases, users discussed women's reproductive rights. Predictably, *pro-choice opinions* prevailed over pro-life. One user posted a long "list of harms that can occur during pregnancy" (with hemorrhoids included), ending it with an open question: "Do you actually think it is fair and right to force a woman to go through that against her will?"

There was also a "*miscellaneous*" subcategory with the occasional critics of anti-vaxxers, vegans, and prejudicial job recruiters. One user told about their experience of being rejected for a job in an airline company based on their anorectal disorder.

Notably, community members did not always reach a consensus with other users when they expressed their opinion. Disagreements happened sometimes, and users verbally attacked their opponents. *Irony and aggressive humor*, natural for the Reddit environment, took presence (Mueller, 2016). With the specifics of this subreddit, a typical sarcastic "curse" was: "Go enjoy your hemorrhoids" or "Hope all ur hemorrhoids act up today."

To sum up, the community members doubted the authority of healthcare providers, confronted social norms, and defended themselves in online arguments to gain their independence and dignity. The theme *Autonomy* reflected these concerns and aspirations.

Belongingness

Belongingness is “an emotional need to affiliate with and be accepted by members of a group” (Cherry, 2021). The community of people suffering from hemorrhoids manifested the state of belonging in the form of a shared understanding of specific vocabulary, introducing a valuable source to the network, and amusing others to increase group cohesion.

Health-related jargon, abbreviations, and Reddit-specific terms were vital for the *r/hemorrhoid* subreddit. It indicated that the community grew substantially to develop a shared understanding of words unfamiliar to users outside this group. For example, community members used the abbreviation OP, meaning “outpatient surgery,” PP – “postpartum period,” and GI – “gastroenterologist.” Occasionally, users discussed semantic differences in medical terms seeking to reach common ground. “Wait, are we confusing hemorrhoids with hemorrhage again?” – wrote one user, stressing the need to differentiate the release of blood from a broken blood vessel, hemorrhage, from the anorectal disorder.

Besides the linguistic aspect, members of this subreddit enhanced their sense of belonging by *sharing their network of contacts*. For example, active members invited an anal surgeon to address their concerns. “Ask him anything about your buttocks!” – announced the author. Users provided social network support that would benefit the community as a whole. In other circumstances, they referred each other to a doctor who lived in a proximate area.

Once, users boosted each other’s sense of belonging by asking the community: “How are your hemorrhoids?” in the analogy with “how are you?” When they discussed a topic unrelated to the disease, someone could declare: “[A topic discussed] gives me hemorrhoids.” *Sharing humor narratives* on familiar topics with the established boundaries when a joke sounds appropriate and not rude connected community members. Consider the following example:

My father-in-law did three summers of reservist training in the 70s before quitting because (no joke) he had hemorrhoids and calls himself a veteran. Wears a little veteran's hat wherever he goes, has a little flag in his front yard, and has a Marine Veteran Facebook picture.

To conclude, the participants shared a common vocabulary, social network, and affiliative humor to connect with the community, and the theme *Belongingness* aggregated these components.

This chapter discussed what themes related to shame resilience, social support, and humor existed in the discourse among patients with anorectal disorders. A thematic analysis based on the theory-driven approach was utilized. Four themes appeared that manifested more aspirations and needs of the community of patients rather than their current state: *Belongingness, Autonomy, Security, and Efficacy (BASE)*. Altogether, these competencies would lead patients in a favorable direction of empathy, connection, and empowerment.

DISCUSSION

This thesis aimed to identify the main themes in the online community of patients with anorectal disorders, *r/hemorrhoid*. Besides, this thesis sought to access the discourse on shame, social support, and humor. A text mining software, Leximancer, generated a semantic map of the most frequent concepts from the dataset of 10,000 submissions, centered around three overarching themes: *symptoms disclosures, routine practices, and community participation*. A content analysis on a randomized subsample of 200 submissions with a deductive, theory-driven approach was also utilized to put findings into the theoretical framework of shame resilience, social support, and humor. The analysis yielded four themes: *effectiveness, security, belongingness, and autonomy (the BASE model)*.

Previous research showed that Leximancer, coupled with hands-on thematic analysis, can enhance the trustworthiness of qualitative research (Lemon & Hayes, 2020). Combining an inductive computational coding of the entire dataset with the manual deductive, tightened to the theoretical content analysis on the smaller subsample, enables identification of recurrent and overarching themes. It helped generate insights related to shame resilience, health disclosures, online peer support for recovery, patient-provider communication, and the effect of humor on wellbeing.

This thesis applied the Shame resilience theory (Brown, 2006) in the online community dedicated to anorectal disorders. The community members acknowledged that they share abnormalities in common and tried to normalize their life events through casual conversations

about their stigmatized conditions. They were aware that social forces shaped their experiences and critically assessed them. Users reached out to the community to share advice and empathy and developed a common language in talking about the disease. Thus, the participants of *r/hemorrhoid* intentionally or unintentionally expressed resilience to shame in accordance with SRT.

These findings can be situated within the broader research on the psychological health effects of self-disclosure. It is consistent with the widely supported claim of health benefits from revealing online conversations about a topic that is otherwise considered taboo in natural settings (e.g., Chu et al., 2022). The users of *r/hemorrhoid* engaged in increasingly detailed accounts of their experiences, varying from accurate anatomical descriptions to explanations of pain severity and duration. Time played an essential role in the patients' conversations, creating dynamic storytelling: users paid significant attention to the continuity of their disease and recovery. Overall, such narratives served a sense-making function, granting storytellers different aspects of identity presentation (Kerr et al., 2020). Moreover, writing therapy, often described in the literature as “expressive (emotional) disclosure,” allows experiencing emotional catharsis through the processing of traumatic memories and experiences (Mugerwa & Holden, 2012). It could result in more adaptive representations of authors themselves, others, and the world.

These findings also contribute to the previous studies on online recovery communities, membership in which has been considered beneficial for health (Britt et al., 2020; Goldsmith & Albrecht, 2011). The very nature of the *r/hemorrhoid* was a place where people could seek advice and get support from users with similar health conditions. Participants tended to solicit individualized feedback for their specific set of symptoms. They sought a “second opinion” on their concerns that healthcare professionals had not addressed because their contacts were limited

to the appointment time or because of patients' hesitancy to approach doctors. The computer-mediated environment instantly enabled users to get advice and support without physical or time constraints. Members of *r/hemorrhoid* were proactive in their recovery strategies. The detailed description of their self-care procedures allowed users to share best practices to help other online community members. Also, the sense of belongingness to a community of people in a similar situation empowered them as they felt the goal is shared and achievable. Users expressed care and compassion to others and gave each other confidence and encouragement. Cultivating authentic connections with others and sharing empathy is crucial for recovery from illness (Chen & Xu, 2021).

Moreover, these findings contribute to the body of research on patient-provider communication. Patients' trust in healthcare providers and their willingness to communicate with the latter is essential for the success of health interaction (Carmack et al., in press). This thesis provides mixed findings about how patients of the anorectal community assess their interaction with doctors and nurses. A content analysis of a small subsample showed a high level of apprehension and criticism toward providers' competence. However, an automated Leximancer analysis of the whole dataset demonstrated that this kind of criticism was somewhat anecdotal – more often, the concept *doctor* was mentioned in a neutral tone. Additional research conducting sentiment analysis of patient communication would be useful in this domain.

Finally, these findings can contribute to the existing knowledge about the effects of humor on health and wellbeing. In *r/hemorrhoid*, humor served two primary functions: to affiliate oneself with their community and to defend oneself. Although the relationship between aggressive humor and health outcomes had been previously found weak or inconsistent (Kuiper, 2012), this thesis demonstrated that humor was an effective defensive strategy to challenge

prejudices and the existing power structure. Self-defeating humor style did not take a prominent place in the community discourse, which aligns with the general pro-recovery sentiment of *r/hemorrhoid*.

Theoretical and practical implications

This thesis has several theoretical implications for the health communication area of study. First, it contributes to the body of research about online patient communities (e.g., Chang & Bazarova, 2016; Wright, 2002; Zhang et al., 2020). Specifically, it contributes to filling the knowledge gap about the online communication of patients with anorectal disorders. This type of community deserves special research attention because its members are significantly motivated to connect online with others alike due to the stigma and shame attached to their disease. Second, this thesis applies not commonly mentioned in the literature Shame resilience theory to the health communication context. Third, it shows Leximancer data analytics software's effectiveness in qualitative content analysis using a mid-sized sample of data, as well as the applicability of the theory-driven content analysis approach.

In terms of practical implications, the finding of this thesis can help to facilitate better understanding between patients and healthcare providers, patients and their families, friends, and public members. Healthcare providers could figure out what patient concerns remain unaddressed during the visits, forcing the latter to seek information and advice online. Ultimately, successful patient-provider communication can reduce the spread of health-related misinformation online. Last, family members and the public could develop a better awareness of the illness and surrounding stigma and be open to an equal dialogue.

Limitations and future directions

There are some limitations related to the unit of analysis and research methods. First, although submissions collected from Reddit via the software Sprinklr were randomly selected,

they might be subject to the author biases. Users might not accurately represent their actual behavior aiming to construct their desirable self-identity or do it due to memory biases and different writing abilities. Further research might rely on biometrics study design to ascertain more authentic patients' behavior.

Second, this thesis has some limitations imposed by the chosen content analysis approaches. First, the Leximancer text analytics tool builds a concept map emphasizing the word occurrence and co-occurrence. Thus, text mining software might neglect words that do not appear often but have critical importance in a text (Britt et al., 2020). Meanwhile, while a theory-driven approach allowed to get unique theory-related insights, findings that likely stem from the entirely inductive approach might be missed. Using the same inductive approach for computational and hands-on coding of the same dataset would enhance the trustworthiness of findings (Lemon & Hayes, 2020). Also, the theory-driven content analysis could be a subject of potential coders' biases. Next, a sample size of 200 submissions might be too small to make sense of data concerning the theory. Future research on a bigger sample, with the further use of computational techniques, would be beneficial.

Future research can go in several following directions. By comparing patients who are active online with their non-user counterparts, researchers can further investigate the role of the online community in health decision-making, assess the communities' advantages and disadvantages, and their influence on health outcomes. Also, it would be interesting to see how specific topics in the online conversations among the patients evolve over time. Moreover, there is a need for further in-depth qualitative research to explore through in-depth interviews the perceptions of anorectal disease, associated shame and stigma, and relationships among patients, their family members, and healthcare providers.

CONCLUSIONS

This thesis examined how members of *r/hemorrhoid* discussed their experiences and concerns and the role of shame resilience, social support, and humor within the online community. The results suggest that such communities can play an important role in patients' recovery and improving their psychological wellbeing. It allows patients to make sensitive disclosures to fight shame and gain relief. This community has become an essential platform where patients share their advice and expertise regarding the diagnostics and treatment of anorectal disorders. This venue might be complementary to the real patient-provider communication as an additional source of information and support that would otherwise be difficult to get through traditional healthcare. Humor plays a substantial role in the online community, with the aggressive humor style being an effective defense technique. The thesis also points out the need to further investigate the relationships between anorectal patients and healthcare providers to foster deeper mutual understanding. In sum, this thesis provides a clear-cut insight into patients' experiences with anorectal disorders.

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APPENDIX

A Codebook to address RQ2: How do individuals in a community dedicated to those suffering from hemorrhoids make sense of the disease through (1a) shame/stigma, (1b) social support, and (1c) humor?

Shame Resilience theory, four components (Brown, 2006):

Vulnerability acknowledgment

the ability to accept personal vulnerability and recognize shame triggers (“I understand what is happening and why”)

Critical awareness

the ability to evaluate societal expectations – analyze if these expectations are attainable, be skeptical of social forces that shape own experiences (“Who says it? What benefits they have from this definition?”)

Reaching out

the ability to reach out to others to both find empathy and offer empathy. Group members share their struggles, give each other advice, and bolster courage.

Speaking out

developing fluency in the language of shame while openly discussing personal issues with others. A shared language helps to develop strategies for resilience.

Social support, five types (Cutrona & Zuhr, 1992):

Emotional support

expressions of care, comfort, concern, empathy, and encouragement (“I care about you”)

Esteem support

refers to behaviors directed at improving one’s self-worth and praising one’s attributes and abilities. Giving respect, compliment, or validation (“You are valuable”)

Instrumental, or tangible support

goods, services, and physical aid to help cope with stressors

Social network support

helping to enhance one’s sense of belonging or offering to be there for others

Informational support

messages that include information, advice, or feedback

Humor Styles Questionnaire, four styles (Martin, 2004):

Affiliative

making jokes to connect with others in a benevolent, positive manner (“I joke around with other people”)

Self-enhancing

Laughing at yourself in a constructive, non-detrimental manner (“The absurdities of life often amuse me”)

Aggressive

being sarcastic towards others (“When telling jokes, I’m not very concerned about how other people are taking it”)

Self-defeating

connecting with others by derogating self (“Letting others laugh at me is my way of keeping others in good spirit”)