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**Slang and Self-Harm: A Qualitative Exploration of the Usage
of Slang on Reddit Self-Harm Communities**

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Abstract

Background: Language is an integral part of our daily conversations, shaping thoughts, emotions, and behaviour. Slang forms an integral part of language and is a highly colloquial and informal vocabulary that often has an in-group meaning different from its usual one. This characteristic makes it an integral marker of in-group solidarity for people with shared experiences, such as self-harming. Users in self-harm peer support groups increasingly use slang to communicate their self-harm experience. This study aimed to explore and capture the usage of such slang in self-harm peer support groups to investigate this sharing of experience.

Method: Slang terms were analysed from two self-harm peer support groups on Reddit. A list of the most frequently used slang terms was compiled based on two popular posts explaining the slang words. The PRAW Reddit API was used to conduct a preliminary analysis of the most frequently used slang terms from this list and then to source user posts containing the identified slang words. The study excluded posts that did not contain the slang word or used the word in its literal meaning. Conventional content analysis was used to extract codes from the data and identify key concepts and themes. The codes were then grouped into categories and domains for further analysis.

Results: 211 and 199 posts were analysed on two Reddit communities. Differences in the words usage between the groups were found, reflecting the groups purposes. Instead, the most common domains ranged from discussing medical care for wounds, seeking support, inquiring about the wound type, and themes of relapse and abstinence.

Discussion and Conclusion: This study compiled a list of the most prevalent slang words used within these peer support groups and the key concepts that they portray. The domains analysed provide a foundation for further research on the role of slang in self-harm peer support groups. Clinicians and healthcare professionals can also utilise detailed knowledge about these slang words to penetrate the in-group culture and make meaning of their clients' self-harming experiences. Thus, this study highlights the importance of understanding the role of slang in shaping the perspectives of individuals with shared experiences.

Keywords: slang, self-harm, reddit, communities, qualitative

Chapter 1

Language is the vehicle through which humans engage in conversation with one another. Although the linguistic relativity hypothesis has received some valid criticism (Pinker, 2000), there is ample evidence to establish that language interacts with our thoughts and emotions (Franklin et al., 2008; Gutfreund, 1990). Slang is an integral phenomenon of language and has been the topic of research for several linguists and lexicographers. Partridge (1970) states, “Slang is easy enough to use but very hard to write about with the facile convincingness that a subject apparently so simple would, at first, seem to demand. But the simplest things are often the hardest to define, certainly the hardest to discuss, for it is usually at first sight only that their simplicity is what strikes one the most forcibly” (p. 1).

For this reason, researchers like Dumas and Lighter (1978) avoid the definition issue by providing certain identifying criteria for slang:

- i. It is used in place of the well-known conventional synonym.
- ii. Its presence will markedly lower, at least for one moment, the dignity of formal or serious speech or writing.

The most common definition of slang is that it is an improper, unsystematic, and very-unformal vocabulary that diverges from that of standard lexicon. It is typically in opposition to standard language, and stems from a transgressive and rebellious attitude (Fasola, 2012). It serves as a powerful weapon that is used to mock, ridicule, or go against the social order, in an effort to do things in one’s own way. It is important to understand that slang is not just a linguistic phenomenon, but a practice that is rooted within social behaviours and needs. As Adams (2004) states in his book, our choice of speech is not just a mode of communication but an important marker of personal and social identity. Therefore, slang is often used as a vehicle to serve the complementary needs of fitting in and standing out.

Mattiello has worked extensively on this topic and she believes that there are different approaches one could take to come up with the composition of slang (Mattiello, 2005, 2008). For the purpose of this project, slang and its subsequent properties are discussed from a sociolinguistic point of view. The book titled 'Slang and sociability' is an important piece of work that discusses this viewpoint. The author of the book, Eble (1996) states that slang is often used to identify and strengthen group cohesiveness. She also goes on to say that the usage of slang vocabulary often quickens group acceptance, facilitates friendliness, and preserves the in-group solidarity. Danesi (2010) concurs with this viewpoint and writes how slang is an inalienable part of the 'act' that humans add to their persona in social situations. Therefore, slang is an intrinsic part of group culture and the influence of slang on group think among social subgroups is incredibly significant.

1.1. Functions of Slang

Mattiello's (2005) early work on slang is elaborate and clearly discusses the functions that slang can play within subgroups. She views slang as a sociolinguistic phenomenon and discusses how it is the restricted speech of distinct and often marginalized subgroups within our society. She also goes on to note that specific slang words do seem to be temporary. For instance, words that were slang in the 1950's might be accepted as jargon nowadays or even fade away and become obsolete.

The unconventional vocabulary of slang words that are often characterized by a sense of informality and familiarity can serve multiple purposes within social groups (Mattiello, 2005). They could aid in:

- i. Secrecy- Slang often acts as an effective method to keep secrets from outsiders and hence protect the in-group. It can also be used to keep secrets from authority figures.
- ii. Intimacy- The usage of slang sends an implicit message of intimacy and hence builds a relational identity that strengthens group bonding and closeness.

- iii. Jocularly- Slang is often used in humorous situations to reinforce the emotion of humour.
- iv. Offensiveness- Slang typically consists of a range of offensive vocabulary that is used to mock people and depict their negative qualities or attributes.
- v. Sympathy- In certain contexts, slang can be used to express understanding, tenderness, compassion and overall sympathy for a person or situation. This builds a very strong intimate sympathetic relationship between both actors in a situation.
- vi. Mitigation- Lastly, slang can be used to reduce the seriousness and mitigate a situation or to avoid using words that are considered social taboos.

Slang is an innovative, expressive, novel and fresh phenomenon that tends to originate from the youth and adolescent demographic who further propagate and grow the usage of these words (Danesi, 2010; Eble, 1996; Mattiello, 2005). Danesi (2010) suspects that during adolescence there is an innate need to reorder the world; young people have a strong need for autonomy and seek to gain control of the environment. Hence, the usage of novel terms that could sometimes even repulse other demographics tends to be a very exciting prospect for people from this age group. Moreover, it is important to acknowledge that the emergence of social media has only increased the usage and growth of slang (Eble, 1996).

Danesi (2010) adds that there are multiple channels of influence that are used to spread the usage of slang. Due to this spread of slang, people are now familiar with different slang words from various cultures and groups. He concludes that the primary criterion that people use to add slang to their vocabulary is that of need. If slang word comes in at time to fills a specific need, it is likely to solidify and become part of the general colloquial vocabulary of that group.

This study seeks to explore the usage of slang among two virtual communities of people who self-harm. However, before slang and self-harm are discussed together, it is important to understand the definition, prevalence and functions of self-harm.

1.2. Prevalence and Functions of Self-Harm

Non-Suicidal Self-Injury can be defined as the direct, purposeful damage of one's own body tissues, without an intent to die, for reasons that are not approved culturally or socially (Klonsky, 2007; Klonsky et al., 2014; Nock & Favazza, 2009). According to the Nock and Favazza (2009) this definition is important for four main reasons.

- i. It indicates that the act of self-injury is voluntary, intentional, and carried out with a specific goal in mind.
- ii. This act causes instant physical harm to the person who engages in it.
- iii. It is unique from other instances of self-harm because there is no active intent to die during this behaviour.
- iv. Acts like getting a body piercing would not constitute as self-harm as this is culturally sanctioned.

This definition has not always been apparent and there has been a lack of consensus in the terminology among earlier research (Nock & Favazza, 2009; Rodham & Hawton, 2009). Infact, research has documented how this behaviour was termed as multiple different names such as deliberate self-harm, self-mutilation, self-abuse etc (Klonsky et al., 2011) . One reason why this behaviour has not always been clear is due to (iii). The only way research is able to assess a person's intent to die is through their self-accounts of the same and these have proven to be not particularly reliable (Nock & Favazza, 2009).

To combat these issues with definition and classification, the above mentioned authors (2009) propose a larger umbrella model known as Self-Injurious Thoughts and Behaviours which is present below as Figure 1. This classification is broadly divided into two

subsections: Suicidal Self-Injurious Behaviours and Non-Suicidal Self-Injurious Behaviours (Nock & Favazza, 2009).

Suicidal Self-Injurious Behaviours is further divided into four subsections (Nock & Favazza, 2009). The sections are suicidal ideation, suicide plan, preparatory acts and suicide attempts. Suicidal ideation refers to when a person is constantly ideating about engaging in self-injurious behaviours with the purpose to die. Suicide plan is when a person has clearly developed an elaborate plan with concrete steps on how they want to die. Preparatory acts are when the individual carries out some tangible steps in order to engage in the injurious behaviour (Posner et al., 2007). For instance, purchasing a rope with the intention of hanging oneself would be a preparatory act. Lastly, a suicide attempt is when the person takes part in a self-injurious behaviour with the clear goal of ending one's life.

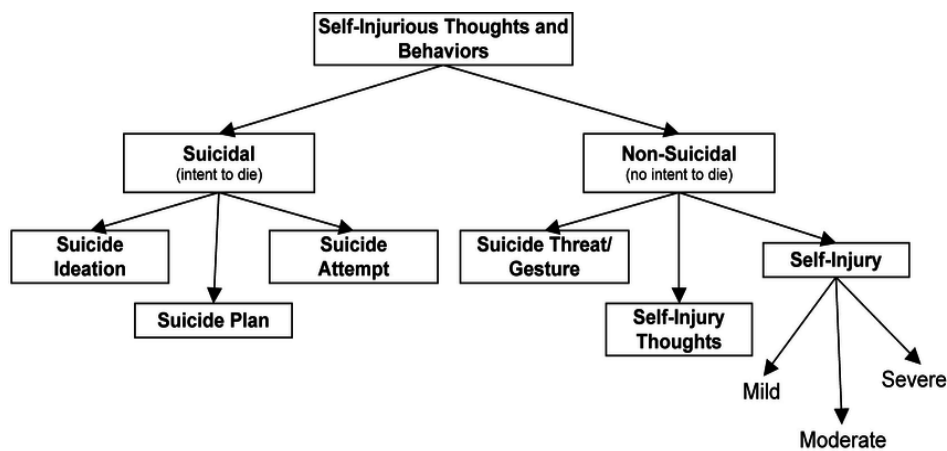
Non-Suicidal Self-Injurious Behaviours is further divided into three subsections (Nock & Favazza, 2009). A suicide threat is when a person makes others believe that they will engage in self-injurious behaviours in order to die, but that person has no suicidal intention. Non-Suicidal self-injurious thoughts are when people have ideas and urges of injuring themselves but do not do so. Lastly, Non-suicidal Self-Injury which is further divided into mild, moderate and severe based on the frequency and severity of the self-injury (Nock & Favazza, 2009).

Two other forms of self-injury that do not fall into this umbrella are major self-injury and stereotypic self-injury. Major self-injury is an infrequent act, typically occurring in people with psychosis and the self-injurious episode is extremely severe such as severing a limb or cutting out an eye (Hooley et al., 2020). Stereotypic self-injury is common among people with developmental disorders. It is an act that is rhythmic and fixed in nature which serves purposes different from those for people who engage in NSSI (Hooley et al., 2020). For these reasons, these two acts do not classify as NSSI.

It has also been well documented that non-suicidal self-injury is linked to future suicidal ideation and suicide attempts (Asarnow et al., 2011; Wilkinson et al., 2011). For these reasons, it is essential that NSSI is understood from a comprehensive lens.

Figure 1

Classification of Self-Injurious Thoughts and Behaviours



Note. Adapted from “Nonsuicidal self-injury: Definition and classification.” by M. Nock and A.R. Favazza, 2009, *Understanding nonsuicidal self-injury: Origins, assessment, and treatment*, pp 9-18(<https://doi.org/10.1037/11875-001>).

A demographic study of 14,372 college going participants in America found that at least 15% had engaged in a self-injurious behaviour once (Whitlock et al., 2011). Moreover, an international meta-analysis of 52 studies found that the prevalence rates of self-injury among adolescents was around 17% (Muehlenkamp et al., 2012). It is important to note that the prevalence rates of this behaviour does vary between boys and girls. For instance, Monto and colleagues (2018) found the prevalence rates of NSSI to range from 6.4% to 14.8% for boys, but in contrast, the prevalence rates for girls were much higher, at 17.7% to 30.8%. A study conducted through 11 European countries found the overall prevalence rates of self-

harm among adolescents to be 21%. From this, 16% consists of people who self-harm occasionally and the rest engage in repetitive self-harm (Brunner et al., 2014). Zetterqvist et al. (2021) conducted a study to determine whether the emergence of the Covid-19 pandemic has had any effects on the lifetime prevalence of NSSI among high school students. They compared the lifetime prevalence of NSSI at 3 different time points for high school students from Sweden. The results found that although in 2011 and 2014 the rates were 17.2% and 17.7% respectively, for the year 2020-2021, the prevalence rate had a steep increase to 27.6%. Moreover, a recently published meta-analysis viewed 16 articles that studied the effects of Covid-19 on self-harm. The authors found that although there was considerable heterogeneity between the studies, the pooled prevalence rate of self-harm was not optimistic at 15.8% (95% CI 13.3-18.3) (Cheng et al., 2023).

It is evident that self-harm is a public health concern that needs immediate focus and policy. In order to effectively create this, we must understand the functions and purposes that self-harm plays in people's lives.

The existing understanding of the maintenance of self-injurious behaviour comes from the theory of operant conditioning. Professionals believe the behaviour of self-injury positively reinforces people with regard to the support and attention they receive. Also, negative reinforcement results from a reduction in negative emotions or circumventing thoughts that cause stress. Hence, they are motivated to engage in self-injurious behaviours as the consequences are positive for them (Singh, 2018). Nock and Prinstein (2004, 2005) proposed a four-function model of NSSI, with functions differing along two dichotomous dimensions: automatic or social contingencies, and positive or negative reinforcements. Automatic negative reinforcement indicates how NSSI is performed to escape from an aversive affective or cognitive state such as feelings of numbness or emptiness. Automatic positive reinforcement is where NSSI is performed to generate some internal feeling of

control of the situation. Social positive reinforcement is one where NSSI is performed to receive attention or access resources from the environment. Finally, social negative reinforcement indicates how NSSI is performed to remove some unpleasant interpersonal demand. The four functional model began the foundation for researchers to propose various models to study self-injury. Nock also (2010) writes about how people engaging in NSSI have minimal tolerance to stress, poor social skills and a high arousal in response to life stressors. Another perspective by researchers (Klonsky, 2007; Nock & Cha, 2009) is that NSSI acts as an extreme form of self-deprecation or self-punishment by an individual; they are extremely self-critical and hence tend to injure themselves as a form of punishment. It is important to note that none of the models that have been postulated acknowledge the influence of social media on self-injurious behaviour.

1.3. Self-Harm and Media

With the massive upgradations in technology and social media, NSSI is also discussed and depicted in movies, TV shows etc. These platforms are easily accessible to the adolescent and young adult population who are the most at risk of engaging in NSSI. Researchers are trying to understand whether media depictions of NSSI influence people either positively or negatively. Various studies have been conducted to depict how NSSI is shown in unidirectional media and has found that a vast amount of information put out through these platforms are misleading. Whitlock, Purington and Gershkovich (2009) believe that most research till date is conducted on the effects of unidirectional media on self-injurious behaviours. However, they state that the internet provides us with a vast array of bidirectional media websites under which the function of communication and interaction between one and another is essential to understand.

Bidirectional media refers to platforms where people interact over the internet through text messages, images videos etc. Essentially there is a back and forth between people, and

the views and beliefs of members is many a time shaped by their interactions with others. The current atmosphere of the world is certainly focused on the world of social-media and the interactions that people have online. It is thus important that researchers pay close attention to this world in order to better understand human behaviour.

Bidirectional media websites such as Facebook, Twitter, and Reddit have various virtual communities on them that are created for people who self-harm to join and connect with each other. These communities are thriving on various platforms and boast a vast number of members and posts cover different kind of themes such as: conflict with parents, urges to self-injure, relapse and abstinence incidents, comical memes and even daily activities like cooking and favourite TV shows. It is plausible to assume that people who engage in self-harm have consistently been isolated and treated differently when confiding in people around them and sharing their self-injurious behaviours to them (Whitlock & Lloyd-Richardson, 2019). Through the above-mentioned bidirectional media websites, people thus gain the opportunity of connecting to others and interacting with them about their self-injurious behaviours. They might feel more welcome and are able to relate to these group members much more easily than they would even with their no self-harming peers. Hence, these communities store a treasure trove of data pertaining to individuals who self-injure.

A couple of studies have been conducted that provide the author with a footing to venture into these virtual self-injury communities. For instance, Lewis and Baker (2011) carried out a content analysis on 71 websites of non-suicidal self-injury. Their analysis found that around 30% of the websites contained graphic images of the behaviour. Further, around 62% of the messages did not explicitly accept or deter from using NSSI as a method. Around 92% of the websites believed it to be an effective coping method. These authors believe that these websites are normalizing and reinforcing NSSI. They suggest that professionals working with clients who self-injure must enquire from them what they access online and

whether they are frequent visitors of such websites. Whitlock et al. (2007a) elaborate on how prevalent self-injury communities, websites and message boards are. She also states that this number is steadily on an incline. The authors primarily believe that these communities serve as a ‘narrative reinforcement’ where the member can share stories and relate to similar stories, which in turn may normalize and justify their self-harm behaviour.

Reddit is a bidirectional social media news platform that allows people to share posts, interact with each other and join certain communities that they relate to. Many such communities are created for people who self-injure so that they can relate to fellow members and share their experiences. These groups are high in population and even boast memberships upwards of one hundred thousand.

These communities have their own unique characteristics, rules for group members to abide by, and moderators that enforce these rules. Both communities share certain common rules such as a strict prohibition on sharing self-harm photos, or an immediate ban if anyone encourages members to self-harm or attempt suicide. However, it is important to mention that both these groups communicate these rules in different ways. For instance, the first community communicates these rules via formal and professional vocabulary. On the other hand, the second community seems to use informal words and relaxed tones to communicate these rules. These intricate differences do seem to translate into the extent to which certain rules are abided by. One important difference between the guidelines on both communities is that the second community says that it could be a “potentially triggering place” and perhaps this guideline can also influence the types of posts that members make on this community.

1.4. Slang and Self-Harm

The usage of slang by people who self-harm seems to be a growing phenomenon. People are increasingly using slang to express their emotions and struggles with self-harm on these communities. This increases relatability makes it easier for people to connect with each

other. Besides a paper that studied the language of self-harm content on Instagram (Moreno et al., 2016), there is no research on the usage of novel slang words by self-harm communities. While the above work lays the foundation in the sense that it discusses the hashtags and methods through which self-harm is displayed on the internet, it does not take it further by exploring the creation and usage of these specific words. There is a clear need to study and understand the role that these slang words play. Before proceeding further, it is key to discuss the two theories that this study leans on.

1.4.1. Theoretical Perspectives

Two theories that are significant with regard to this research study are explained below. These studies serve as the foundation and backbone in order to understand the existence and mass appeal of the virtual communities. They serve as a theoretical framework for the thesis and will be instrumental during the data analysis.

Turner and Killian (1972) studied crowd behaviour and found that a group only begins to form due to the coming together of “like minded” individuals. These people have similar dispositions, and their actions are then reinforced and intensified by the crowd. Hence, the group eventually tends to converge around a set of mutual interests. Such impulses, are likely to control the media content and virtual communities that an individual may get attracted to (Whitlock et al., 2009).

Turner and Killian (1972) further discuss an “Emergent norm theory”, here, due to the emergence of new norms in response to a crisis, non-traditional behaviour begins to occur. The basic suppositions of this theory are that collective action is rational, it is a response to an ambiguous precipitating event, and that new norms of behaviour appropriate to that action situation emerge through group processes without prior coordination and planning (Lemonik Arthur, 2013). In the context of self-injury virtual communities, individuals converge around

a set of shared behaviours through which new norms are made. These norms may be created for the good and bad as the distinctive characteristics and behaviours of key figures can be positive or negative in nature. For instance, an individual who understands that supporting other group members and being respectful to one another is normative behaviour, may begin doing so.

With this theoretical framework in mind, one may appreciate the existence and appealing nature of these self-injury virtual communities. They allow instant identification and connection with group members anonymously. Also, researchers believe that membership on virtual self-injury communities act as means of “narrative reinforcement”. Here, the sharing of similar life stories and interpretations may normalize and subconsciously justify the use of self-harm (Whitlock et al., 2007a).

The author (Himelein-Wachowiak et al., 2022) strongly believes that being a member of virtual groups and communities has become part of one’s identity and social role. They constantly wish to maintain their status in the group and receive validation from the other members. Moreover, in order to feel part of this group, newer members might feel the need to change the style of their posts and the way it is written. A culmination of all these factors could be the reason for increasing slang usage on these communities. As discussed above, slang can quicken group acceptance and increase the intimacy of the group (Mattiello, 2005). Slang also acts as an effective means to keep certain group ideas as secret (Eble, 1996). Self-harm is a sensitive topic, and its communication requires the aforementioned qualities in order for it to be done in a delicate way. Moreover, the demographic that do engage in self-harm are perfectly suited to create and use slang while talking about their self-harm. The usage of slang to communicate self-harm experiences has not been studied before and is what this study will aim to do.

1.5. Aim of the study

The aim of this study is to elaborately explore the usage of slang on two Reddit virtual self-harm communities. These communities were particularly selected because they have a high number of people who subscribed to these groups. Moreover, the two communities contained a whole range of topics that were discussed amongst members, and it served as an ideal space to study the usage of slang. While lurking on these communities, it was found that people often use certain slang words to communicate how they are feeling. The slang words seem to be unique to people who self-harm and the members of these groups seem to be familiar with it for the most part. This study will first attempt to understand the slang words that are most predominant on these two communities. Once done, these will then be analysed to discuss the content of these posts. Moreover, the relationship between slang words and the predominant content in which they seem to appear will be evaluated.

1.6. Significance and Aim of Study

This research is significant due to the following reasons. First, bidirectional media popularity is on a steady increase. With this increase comes an increase in the number of virtual self-injury communities. Even though digital, these communities be based on the interactions between the members and on the support and comfort members are able to provide to one another. The peculiar issue is to explore and capture the specific words and phrases that people use within these communities. Researchers are increasingly talking about studying self-harm from a person-centred framework where we consider people's "lived experiences". The most appropriate way to do that is by also accounting for the language and words that people use to describe their experience. Second, in comparison to any other existing research on self-injury, this research is the most unobtrusive and naturalistic. The issue at hand is sensitive and more importantly, unique to each individual, hence, research

needs to try to conduct more unobtrusive forms of data collection that this thesis attempts to do.

This in-depth analysis could have various implications in the real world. Therapeutic practitioners could use knowledge of this community and the specific slang words with their clients who self-harm. This could help build rapport and quicken the therapeutic alliance.

1.7. Research Questions

For the purpose of this study, three research questions have been proposed. They are:

- i. What are the most predominant slang words that are used on the considered self-harm virtual communities?
- ii. What are the ways in which these slang words are used by people to talk about their self-harm?
- iii. What are the differences between the two virtual communities on the usage of slang words and the content in which they appear?

Chapter 2

Method

2. 1. Objectives

Three objectives have been arrived at that are in accordance with the above research questions; specifically:

- i. To determine the predominant slang words that are used on the selected self-harm virtual communities.
- ii. To capture the domains and subdomains in which the slang words are used for people to communicate on these communities.
- iii. To identify the differences between the two virtual communities on the usage of slang words and the content in which they appear.

2. 2. Research Design

The present study employed data scraping combined with an elaborate content analysis in order to effectively study the three research questions. Essentially, it falls under the exploratory qualitative design in an attempt to portray the slang words, domains of communication and differences between two virtual communities on Reddit. The field site for this study was a web-based discussion community that is publicly accessible. The author was a ‘lurker’ on the group as that is the most efficient way to get naturalistic and unobtrusive data.

2. 3. Reddit and Self-Harm Peer Support Groups

Reddit is a bi-directional media platform where users can create accounts, make posts, share photos/videos, interact with each other’s posts via likes (‘upvotes’), dislikes

(‘downvotes’) and comments. Reddit is divided into several groups (‘subreddits’) and each of these subreddits are centred around a particular theme or content matter. Members usually join a subreddit in order to be shown posts from that group on their personal feed once they use the application (Boettcher, 2021).

There are several subreddits that have been created to discuss people’s experiences, challenges, and stories about mental health. These groups are used by people to discuss their struggles with depression, anxiety, stress and many other debilitating issues. More recently, there have been multiple subreddits that have been created for people to share and discuss people’s stories of self-harm (Himelein-Wachowiak et al., 2022). These groups have been gaining popularity and few of them even boast memberships as high as 120,000. Two such groups were selected for the purpose of this study. As Lavis and Winter (2020) suggest, the names of the groups being researched should be kept secret. For this reason, the communities we selected will hereafter be called C1 and C2. These groups are being used by members to share one’s experience or ask questions from other members. These interactions seem to create a sense of in-group among community members.

2. 4. Description of Communities

The final question of this thesis aims to explore the differences between the two communities, C1 and C2. Before understanding these differences in the results, it is important to first understand the daily functioning of these two communities.

2.4.1 Description of C1

C1 is a community that has more than 120,000 members. The rules on this community mention:

- Members should not see medical advice

- They must not share photos of their self-harm
- They should not encourage anyone to self-harm or attempt suicide
- They must not provide elaborate instructions on self-harm
- They should not glorify self-harm

In this regard, C1 had a larger number of group moderators. These moderators voluntarily cleaned the group and deleted posts that were in violation of these above guidelines. C1 had significantly high moderation and censorship. Also, the guidelines on C1 use a formal and technical language.

2.4.2 Description of C2

On the other hand, C2 is a community that was created because they believed that C1 was no longer a place where they could share their experiences freely. In this regard, C2 has less moderation and censorship. They have more than 65,000 members and although the community has a few guidelines, they are far more lenient in enforcing them. One of the guidelines even admits that this community is not for everyone because it has the “potential to be a triggering environment”. The other guidelines were:

- Members should not share photos of their self-harm
- Members should not glorify self-harm
- They should not encourage anyone to self-harm
- They should not share any photos of the tools they use to self-harm
- They should not say that they are more valid for engaging in more severe self-harm

These guidelines on C2 are more informal with casual vocabulary and even contain swear words.

2. 5. Coding and Data Scraping

While lurking on these two communities, it was found that users consistently communicating through certain SH-related slang words that typically seemed to mean something outside of its common accepted definition. Upon a deeper inspection of these slang words, two posts were found that consisted of a list of words. The members called these words the dictionary of SH vocabulary. These lists of words were compared, and a common list of 32 words were selected to serve as the preliminary list of slang words used by these communities.

A Python script was run to determine the number of times the 32 slang words were used on either community over the months of November 2022 to January 2023. Via the API Wrapper- PRAW, this code was able to iterate through all submissions on the two communities and searching for the 32 key terms that were provided as input. Through this program, 5 slang words were found to be predominantly used within the two communities and considered timeframe. These 5 slang words and the meanings with which they are used on these communities are reported below:

- i. Styro: A wound that goes to the dermis layer of the skin. This is typically white in colour and looks like Styrofoam or 'styro' for short.
- ii. Beans: A wound that goes to the hypodermis layer of the skin. This is the fat layer of the skin and tends to look like beans right after the act of self-harming.
- iii. Juice: The blood due to self-harm wounds.
- iv. Yeet: The act of cutting or self-harming (specifically cutting).
- v. Butterfly: A steri-strip band aid used for wound care that looks like a butterfly.

Relaying on these 5 key terms another python script was again run on the Python PRAW Wrapper to source posts and subsequent comments that contained these slang words

between the time frame of November 2022 to January 2023. Data was stored into a CSV file and the following information was scraped: Link, Post Title, Post Body, Comments, Upvotes, Number of Comments, Date of Post and Time of Post. Two files were created, one for each community and then the data was analysed.

2. 6. Sample

For this study one sample unit was considered as an entire thread on the community which included all the comments present at that time. Essentially, a thread included a title, a body description by the creator of the thread, comments that follow the thread and sub comments on the comments of the thread. This entire thread was considered as one sample unit for analysis.

2.6.1. Sample Size and description

The sample size for this study was 410 threads. 211 threads were sourced from the first community C1 and 199 threads were sourced from the second community C2. The threads were created by anonymous members on the community and can further be commented on by any member.

2.6.2. Sampling Technique

Purposive sampling technique was employed to arrive at the sample threads that will be further analyzed.

2.6.3. Inclusion Criteria

The inclusion criteria for this study are:

- i. Threads were only included if they contained any one of the 5 slang words reported above.

2.6.4. Exclusion Criteria

The exclusion criteria for this study are:

- i. Threads that were not created in the timeframe of November 2022 to January 2023 were excluded.
- ii. Threads that did not contain one of the 5 slang words were excluded.
- iii. Threads where the keyword was used in its literal sense rather than in the slang connotation were excluded.

2. 7. Ethical Considerations

Hine (2010) says that the ethics of using internet data are particularly tricky due to the possibility of lurking being unannounced. It may be assumed that the internet interactions are public, yet this does not always accord with the practices and expectations of the participant. Also, the levels of concern of ethics would vary based on the sensitivity of the topic.

Self-injury is a sensitive topic and hence elaborate care has been taken to ensure a solid ethical framework. It was ensured that the usernames of any member were not mentioned anywhere in the study so to protect the digital identity of the member. Also, any data excerpts being used as a quotation in the final paper would be paraphrased in order to prohibit from tracing back to that particular user. Care will be taken to ensure that the group's identity remains private and is not mentioned anywhere. Mentioning the name of the group could lead to a sudden influx of visitors to that community and disrupt the group behavior (Lavis & Winter, 2020).

2. 8. Data Analysis

Conventional content analysis was employed to interpret the qualitative data that is received from these threads. Initially, the data was manually coded followed by the systematic extrapolation of domains and subdomains. This analysis was employed because the existing theory on this phenomenon is limited (Hsieh & Shannon, 2005). As suggested by

Kondracki and colleagues (Kondracki et al., 2002), preconceived categories were avoided, coders immersed themselves within the data to allow codes and categories to flow from the text itself. This was then used to effectively capture the subdomains and domains.

To make this study more rigorous and scientific, the data was analyzed by 3 independent coders. Domains and subdomains were only decided after discussions between all 3 coders in order to improve the reliability of findings.

After coding was completed and the frequency counts of domains and subdomains were finalized, RStudio was used to run some simple statistical tests. Pearson's Chi Square test was run to understand the differences between the two e-Communities on the frequency of domain occurrence and the frequency of subdomain occurrence.

Chapter 3

Results

The aim of this study was three-fold; to determine the most prevalent slang words used on the two communities, to identify the range of topics in which these slang words appeared and to determine the differences among these two groups based on the usage of slang words. In that regard, the following section reports the results that were found for the first research question.

3.1. Prevalent Slang Words

On average, C1 and C2 post per day 32.9 and 33.13 posts, respectively.

Two important threads were found while lurking on the two communities, C1 and C2. These posts were created in order to share the vocabulary of the slang words and their subsequent meanings. They helped in providing the foundation to determine the most prevalent slang words. The 5 most prevalent words that were used over the course of the above-mentioned time frame were:

- vi. Styro
- vii. Beans
- viii. Juice
- ix. Yeet
- x. Butterfly

These words were found across all 410 posts in either community. The frequency counts of the respective words are reported in Table 1.

Table 1

List of the most prevalent slang words and their frequency counts across both communities.

Slang Word	Count
Styro	195
Yeet	151
Bean	102
Butterfly	30
Juice	4
Total	482

The 5 most prevalent slang words, their meanings and their respective frequency counts served as a good starting point to understand these communities and their usage of slang. However, in order to explore this better, an in-depth content analysis was conducted to identify the predominant domains and subdomains that featured these slang words. The following section delineates the domains and subdomains identified throughout the 410 threads also differentiating between C1 and C2.

3.2. Content Analysis

Before delving into the differences between the two communities, it is necessary to explore the domains and subdomains that were generated through the analysis of the threads. A total of 12 domains and 31 subdomains were identified and are reported in Table 2, Table 3 and Table 4. Within the table results will be divided into three separate sections based on the frequency counts of each domain.

In table 2 are reported the 4 most frequent domains and subdomains that were identified.

Table 2

List of the 4 most frequent domains and their subdomains.

Domain	N	Sub-Domain	N
Sense of in-group/community	103	▪ Cry for help/ Feeling lonely and isolated	7
		▪ Experiencing traumatic situations	3
		▪ Seeking support and someone to talk to	42
		▪ Sharing triggering experiences	9
Medical Care	102	▪ Venting/Ranting	42
		▪ Advice on engaging in potentially harmful activities	10
		▪ Care for wound with inadequate supplies/without going to hospital or ER	11
		▪ Infection/infection advice	26
Humour	60	▪ Wound Closure Advice	55
		▪ Irony	35
Curiosity	54	▪ Show-off	25
		▪ How to know when “I hit...” / the kind of wound	23
		▪ Is this experience common or not / normal	27
		▪ What do the slang words mean	4

The most frequent domain was the “Sense of in-group/community”. Within this domain, 5 relevant subdomains were identified. These are: “Cry for help/feeling lonely and isolated”, “experiencing traumatic situations”, “seeking support and someone to talk to”, “sharing triggering experiences” and “venting/ranting”. These 5 subdomains are elaborately explored.

A few posts were noted where members felt the need to ask for help because they were feeling lonely and isolated. As one member pointed out:

“Having extreme urges, I need to YEET please help me, I don’t know what to do.”

Another less common subdomain was when members would share a traumatic situation that they had experienced. One of them notes:

“I just had school lunch. I went into the bathroom and cut. I hit STYRO and it bled a lot.”

A subdomain that was found to occur frequently was when members were just looking for someone to talk to. Many members would note how they felt like this was the only place where they felt like they were heard and understood. Hence, many of their posts would stem from that need for belongingness that these communities offered. For instance:

“Just hit STYRO and could use some support/distraction.”

Another less frequent subdomain was when members took to these communities to share an experience that triggered them to Self-harm. Like one member mentions:

“Just overheard my colleague say that I’m not good, I cannot wait to go home and YEET.”

The final subdomain within this domain was that of “Venting/Ranting”. Throughout the analysis, it was found that many members would take to posting on these communities not necessarily for advice or support but just to get things off their chest through a long text message describing all the things that were going on in their life. For instance:

“Anyone else watch videos while YEETING? A small vent.”

Most of these posts can be characterized by members trying to downplay the seriousness of the situation they are in by using jokes, acronyms and emojis. These vents seemed to allow members the freedom to share things that they could otherwise not share with people in their off-line world.

“Medical advice” was the second most prominent domain that featured in this analysis. The 4 subdomains that encompassed this were “advice on engaging in potentially harmful activities”, “care for wound with inadequate supplies/without going to the hospital or ER”, “infection/infection advice” and “wound closure”. Members were often found seeking advice on whether they could engage in certain activities in context of their self-harm. For instance:

“I YEETED on my right thigh, at least light STYRO. Any advice on how to make running easier?”

These members were seeking medical guidance on whether an activity they had to engage in could be painful or effect their wounds in a negative way. Another interesting subdomain that members would seek guidance on is “care for wound with inadequate supplies/without going to the hospital or ER”. Members would often ask for advice on how to care for their wounds within certain restrictions that they were limited to. One member says:

“I have only small bandages, how do I patch up STYROS?”

Another important subdomain is “infection/infection advice”. There were many posts where members were afraid and took to describing their wounds on these communities to determine whether they have become infected or not. One of them says:

“I used toilet paper to clean my STYRO cuts. Will it get infected or not?”

Lastly, the most prominent subdomain within medical advice was when members took to these communities to seek “wound closure” advice. They would ask the community for

guidance and education on the best way to care for their wounds after the act of self-harm.

For example, one member asks:

“I just YEETED and I’m wondering if its okay to clean the wounds with isopropyl alcohol rather than soap and water?”

The domain of medical advice is interesting because both communities (C1 and C2) explicitly state that medical advice should not be offered on these groups. However, it is one of the most prominent domains found on these communities. It is plausible that young people who self-harm turn to these communities for professional guidance and advice on medical care and wound closure even though the group guidelines say not to do so.

Further, the third most prominent domain that was identified was “Humour”. It is important to mention that this domain was significantly more frequent on C2 and there were only a handful of occurrences on C1. This domain was typically expressed through the usage of comical memes and images to convey the member’s feelings. The two subdomains that comprised this were “irony” and “show-off”. Posts were coded as “Irony” when members took to their posts to describe their situation or experiences in an ironic sense. For instance:

“lol no money to get band aids but I YEETED anyway, I’m so stupid.”

The subdomain “show-off” was when members created posts to attention seek, exaggerate, and share their experiences with self-harm in a way that reinforced this behaviour to the reader. For instance:

“Using my YEET JUICE to paint clown makeup on my face.”

It is important to note that the domain of humour is difficult to elaborate on solely through the descriptions of members. This is because the primary vehicle that these posts used were the memes that contained most of the relevant information. These threads are often marked with a lack of text and an empty post body.

The final domain within this table is the domain of “curiosity”. This consisted of three subdomains, namely “kind of wound”, “is this experience common” and “what do the slang words mean”. The first subdomain can be characterized by when members of these communities would explain their wounds on these groups in order to understand the depth and severity of their wound. They wanted to know whether their wound classified as styro, beans or something else. For instance:

“Does it count as BEANS if it was deep STYRO and I see some fat?”

The second subdomain was typically found when members took to these communities in order to seek assurance that their experience was normal. They would ask the community whether the experience they had was relatable and common. One member expressed this by saying:

“I cut to STYRO, but I can’t feel anything. It’s like there is a bit of numbness, is this normal? Please help.”

Lastly, a few members were curious because they had no understanding of what the slang words meant. Hence, they posted seeking for information on what the words meant. For instance:

“What does BEANS, STYRO mean?”

The following table (Table 3) consists of the next set of domains and their subdomains. The 4 domains that will be covered in this section are “addiction”, “feeling invalid”, “hiding/concealing” and “appearance of scars or wounds”. The addiction domain consisted of six different subdomains. These are “abstaining by doing other harmful activities”, “seeking advice to abstain”, “feelings after relapse”, “tolerance”, “triggers” and “urge to relapse”.

Table 3

List of succeeding 4 (from fourth to eighth) domains and their subsequent subdomains.

Domain	N	Sub-Domain	N
Addiction	26	▪ Abstaining from SH by doing other harmful activities	3
		▪ Stop the behaviour/Seeking advice to abstain	6
		▪ Feelings after relapsing	6
		▪ Tolerance	2
		▪ Triggers	3
Feeling Invalid	16	▪ Urge to relapse	6
		▪ Badge of honour/Milestone to achieve	9
Hiding/Concealing	14	▪ Depth and Frequency of Self-Harming	7
		▪ Excuses/Lies to tell people who see the scars	6
Appearance of scars or wounds	11	▪ Seeking methods to hide scars in social situations	8
		▪ Is this experience common or not / normal	5
		▪ Will my scars fade or not	6

The subdomain “abstaining from self-harm by doing other harmful activities” was very interesting. Many members would share that they had stopped their self-harm behaviour and had replaced it with other harmful activities. For instance:

“I wish I had a good coping mechanism instead of overeating to prevent me from YEETING.”

The following subdomain stemmed from members asking for advice on how to stop self-harming. They made posts asking for advice from other members on how to abstain from this behaviour. Like one member shares:

“When I get urges to YEET I usually give in, does anyone have any tips for distractions?”

The following subdomain is where members shared their “feelings after relapsing”. A few members would make posts on how they felt after relapsing and self-harming after a period of abstinence. These feelings typically consisted of guilt and shame that came with the act. However, a few members felt positive after the relapse. As one member posted:

“I relapsed today and YEETED after being clean. The issue is I not only enjoyed it but I also felt good after.”

Going further, a couple of posts were characterized by members hinting that they had built tolerance to their current severity of self-harm. One of them said:

“I reach STYRO, but I only feel a sting and it does not hurt enough.”

The following subdomain is “triggers”. Members often took to these communities to share certain triggers in their daily life that were making them want to self-harm. As one member described their triggers to self-harm:

“I just realized what triggers me to YEET because I’m feeling like it after a long time.”

“Urges to relapse” is the final subdomain within the umbrella of addiction. Members would narrate how they felt strong urges to self-harm and what they did after that. One account noted:

“Can you tell me how you cope with the YEETING urge?”

The “feeling invalid” domain comprised of two subdomains. They were “badge of honour/milestone to achieve” and “depth/frequency of self-harming”. These are two interesting themes that merit a further discussion. Many members noted how they would feel

invalid unless they cut to a particular depth. They felt like a deeper wound was a milestone that one needed to achieve. For instance:

“I want to generate more monstrous scars in order to feel ‘valid’.”

The other subdomain that this comprised of was the “depth and frequency of self-harming”. Members felt like they had to increase the depth or the number of times they would self-harm in order to feel more valid. One member said:

“I always felt that I’ll only be valid if I cut till BEANS, so I cut deeper than normal.”

The third domain within Table 3 is “hiding/concealing self-harm”. Many members were seeking ways to hide or conceal their self-harm. This manifested through two separate subdomains. They were: “excuses to tell people who see the scars” and “methods to hide scars in social situations”. Many members would ask for excuses or lies that they could tell people if their scars were to be spotted. For instance:

“All my cuts are STYROS. Is there any reasonable explanation for these scars? I can’t hide it anymore.”

The other subdomain was when members sought advice on their attire or similar (e.g., make-up) in order to hide their scars in social situations. For example:

“I have fresh YEETS on my upper arm. How do I hide them?”

The final domain within this list was titled “appearance of scars or wounds”. This domain consisted of 2 different subdomains. They were: “is this experience common” and whether one’s “scars would fade or not”. The first subdomain is similar to the curiosity. However, the primary difference is that all threads in this subdomain were solely concerning the appearance of the scars or wounds. Members would enquire whether their experience with their scars were normal or not. One member asks:

“If I put a BUTTERFLY closure on my cut, will it still scar?”

The other subdomain within this domain was when members would enquire whether their scars would fade or not. One of them asks:

“Do deep YEET scars ever go back to normal?”

The following section, as reported in Table 4, consists of the four least frequent subdomains.

Table 4

List of the 4 least frequent domains and subsequent subdomains.

Domain	N	Sub-Domain	N
Reinforcement	9	▪ Coping/Regulation method	6
		▪ Positive feeling afterwards	3
Self-Deprecation	7	▪ Suicidal ideation and feelings of worthlessness and helplessness	7
Consequences	6	▪ Consequences	6
Dislike for slang words	2	▪ Trivialises the behaviour	2

These were “reinforcement”, “self-deprecation”, “consequences”, and “dislike for slang words”. The domain reinforcement comprised of two subdomains. These were “coping/regulation methods” and “positive feeling afterwards”. Members noted that their act of self-harm was used to cope with or regulate the emotions they would have, thus reinforcing the behaviour of self-harm. One of them communicated this by saying:

“I feel great after a social interaction but then I overthink about it, and it turns into a YEET session because that is the only coping mechanism I know.”

The other subdomain is “positive feelings afterward”. A few members noted how they would feel positive after self-harm. This feeling in turn reinforces their self-harm behaviour.

For instance:

“I only hit STYRO this time. But it felt oddly good.”

The following domain was when members communicated their feelings through a self-deprecatory attitude. Members communicated their “feelings of worthlessness or even their suicidal ideations”, but the tone was predominantly self-deprecatory in nature. One of them says:

“One email wanted me to toaster bath so bad that I ended up YEETING.”

A few members were found to be concerned of their self-harm with regard to the consequences it had. These “consequences” could affect them or even the other people in their lives. One of them noted:

“I YEETED pretty deep a while ago and felt like shit. Was this a consequence of my own dumb actions?”

Lastly, a handful of members communicated their “dislike for the slang words” that were being used on these communities. They believed that it trivialized the act of self-harm.

For example:

“Does anyone else dislike terms such as STYRO, BEANS, bedrock or cat scratches? I feel like it is giving cute nicknames to really serious issues.”

The above tables have been created irrespective of communities, C1 and C2.

However, as previously mentioned, there are some significant group differences between C1 and C2 that merit a more elaborate discussion. The following section contains a discussion on the differences between both communities.

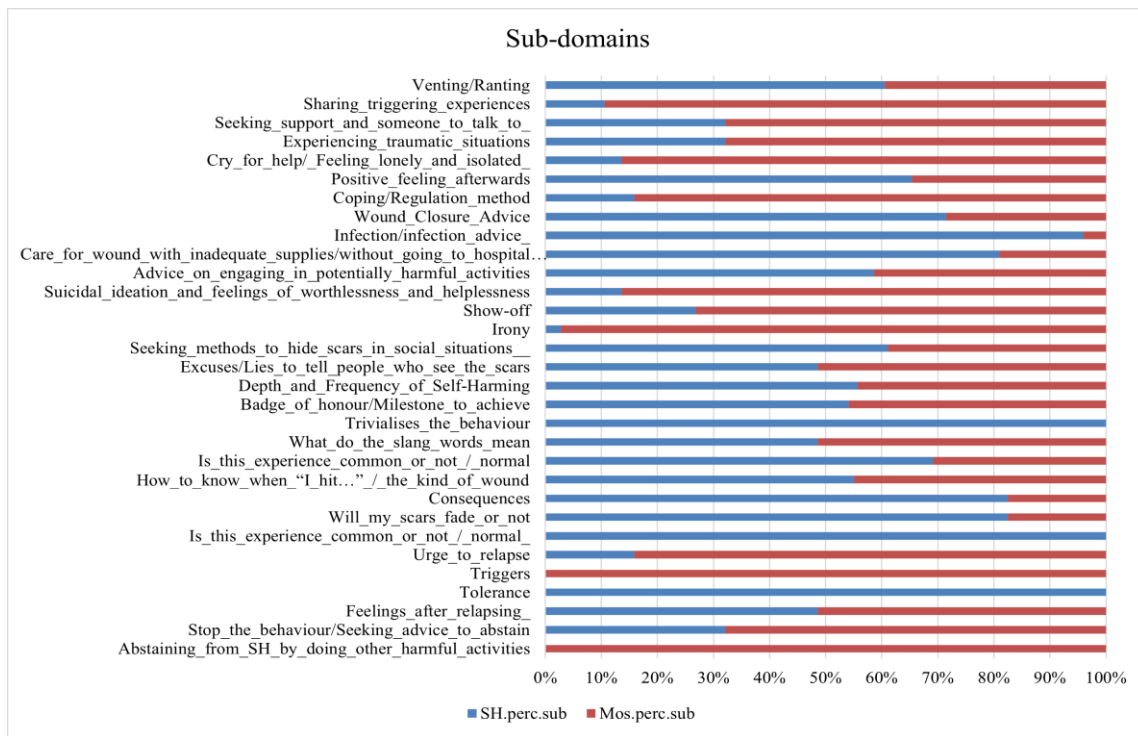
3.3. Differences between the E-Communities

The differences in these communities were visible in the Humour domain. Throughout the analysis, C2 had 52 threads that were identified as humour, whereas there were only 8 posts on C1 characterized as humour. Another interesting finding was that across the 199 posts on C2, a total of 113 posts had memes. There were no memes on any of the 211 posts on C1. It is reasonable to assume that the leniency that comes with moderation on C2 is one of the factors that aids in increasing usage of memes.

In order to assess the differences between both communities, chi square tests were done. The frequency counts of each domain and subdomain were converted into percentages. Following this, the analysis was run on RStudio. The communities C1 and C2 did not significantly differ across the 12 domains. However, there was a significant difference between the two communities across the 31 subdomains ($X^2 = 244.9, p = 0.003$). These findings are displayed in figure 2. Lastly, the slang words frequency did not differ across both domains and the subdomains.

Figure 2

Bar chart indicating the frequency counts of subdomains between C1 and C2



Note. The above figure displays the differences between both communities on the 31 subdomains. The bar in blue corresponds to C1 and the bar in red corresponds to C2.

A discussion of these findings is corroborated with pre-existing literature in the following chapter.

Chapter 4

Discussion

This study had three general aims. It sought out to understand the most frequent slang words used on two self-harm e-communities, capture the content across which this slang appeared and report differences between the two communities that could appear. In this regard, this chapter aims to understand the findings through prior research while suggesting possible reasons for the same.

Differences between both Communities

The following section aims to understand the results and speculate on them, while taking into consideration pre-existing research and findings. E-Communities have always been a source of information and knowledge (Case et al., 2001). The authors of the previously-mentioned paper reported that e-communities should serve two main functions:

- i. Members should be able to locate and access any relevant information on the community.
- ii. The group should be able to foster a spirit of community so that members feel like they belong thus developing a sense of identity.

This is relevant to the above thesis because through the results it is evident that both communities, C1 and C2 comply with these two aspects. However, the key difference that was evident through the analysis was that C1 pays more attention to the first aspect - disseminating information, and C2 pays more attention on the idea of fostering a community spirit and a feeling of belonging. Take for instance the most frequent domain, sense of in-group/community. Including all subdomains, this was found on C2 a total of 60 times, whereas on C1 it occurred about 43 times. Another factor by through which C2 prioritized building a community spirit is the usage of an Automatic bot under every post. As a user would create a post, the bot would leave an automatic comment on this post saying “*Hugs*”.

We also found that most users even commented back on this comment usually saying, “*I love you automod*”. Hawton and her colleagues (2021) found that a sense of loneliness and isolation during the covid 19 pandemic was a factor that led to self-harm among adolescents. Although Covid-19 pandemic is over, it is likely these feelings do persist among adolescents. Hence, it is also plausible that the act of fostering belonging by ensuring automatic comments on members posts could help in alleviating this feeling of loneliness.

The domain medical advice was the next most frequent one. It occurred a total of 102 times. However, the key difference was that it occurred a total of 80 times on C1 and just 22 times on C2. This is important because it implies that people choose to seek C1 more often than C2 in order to seek medical advice. While the guidelines of both communities explicitly state that providing medical advice was prohibited, members on C1 were more than keen to provide medical advice to members. During the analysis, a google document was found posted on a thread that contained elaborate medical care advice. This document described how members should treat their wounds based on its severity and also explained when they should seek professional help or visit a hospital. Park and colleagues (2021) found that people seeking medical treatment after self-harming are often viewed negatively by medical professionals and this act is perceived as manipulative and attention-seeking. Another study (Shaw & Sandy, 2016) found that nurses in medical institutes often find people who self-harm as waste of time. Nurses felt that caring for people who self-harm was taking away from their time to care for people with other injuries. Moreover, it is important to note that disclosure of self-harm leads to severe judgement and negative attitudes (Park et al., 2021), which may in turn act as a barrier to help seeking or seeking professional advice (Williams et al., 2020). The analysis here conducted backed up these findings, as the posts often spoke about being a burden on medical facilities and people even tried to care for their wounds without going to the hospital. It is plausible that members choose to seek medical help on this

community because they are offered a safe, no judgement space where the barrier to entry is minimal due to communications being entirely virtual.

While on the surface, these aspects of C1 may seem beneficial and helpful to people who self-harm, it is important to discuss how these attributes can manifest negatively if they are not moderated and managed well. The medical advice that was received by members on C1 often came from other members who were not medical professionals or doctors. These people were more likely to be adolescents themselves who were providing medical information based on their first-hand experiences with self-harm. While the analysis did not go as far as to evaluating the correctness of this medical advice, it nonetheless ought to specify that is not beneficial for this community to allow members to be the access to medical advice themselves. It has been well documented that social media is prone to health misinformation (Sylvia Chou et al., 2020). The authors (2020) note that platforms like Reddit remain severely understudied and one of the solutions to combatting health misinformation suggested by them is to enhance surveillance on understudied platforms. By allowing members to provide health advice on self-harm, the community C1 is likely to contain sections of misinformation. This misinformation compounded by the fact that a person who self-harms is not likely to seek medical help (Rowe et al., 2014) can have negative consequences for the members.

Similar to this, while it may seem that C2 does a positive job at fostering a sense of community and spirit, it is important to discuss this deeper and understand what this community is centred around. As the author of one study pointed out (Lin, 2008), sense of belonging is an important factor in virtual communities. They believe that participation in communities would be negligible if members did not feel like they belonged to this community. It was evident that members in C2 felt like they belonged and that feeling increased online disclosure. However, the concept of ‘narrative reinforcement’ needs to be

considered. Whitlock and colleagues (2007b) have well established that the sharing of similar life stories and interpretations may normalize and perhaps justify the use of self-harm. They termed this as narrative reinforcement indicating that the disclosure of one's narrative could in turn reinforce the reader's self-harm behaviour. It is important to mention that the narratives on C2 seldom mentioned recovering or help seeking. The narratives on C2 were predominantly centred around aspects like venting, sharing trauma, irony, or showing-off about their self-harm. It is possible that these narratives can reinforce self-harm among the readers of C2.

Another important aspect of C2 was that it had a higher number of threads coded as "Humour" when compared to C1. C2 had 52 threads coded as humour whereas C1 only had 8. The irony and attention seeking that was apparent on posts in C2 seemed to normalize and romanticize the act of self-harm. This is important because pre-existing research (Abi-Jaoude et al., 2020) has indicated that normalization and romanticization of self-harm on social media could reinforce self-harm behaviour.

A total of 113 posts on C2 consisted of memes whereas no posts on C1 contained memes. The prevalence of memes is in accordance with existing work by Shanahan and colleagues (2019). These authors studied all the images that accompanied the hashtag of self-harm on Twitter, Instagram and Tumblr. They found that more than half of the images had no image of self-harm. Instead, they consisted of selfies, drawings, daily photographs, references to films and memes (Shanahan et al., 2019). One distinct quality that was evident across most memes on C2 was that although the pictures being used were typically bright, soft, and colourful, the text that accompanied it were serious, dark and talking about potentially traumatic situations.

The domain "addiction" occurred across both communities, C1 and C2. There is growing body of research that aims to view self-harm as an addictive behaviour. For instance,

the authors of a recent paper (Blasco-Fontecilla et al., 2016) proposed that both non-suicidal self-injury and suicidal behaviours could be conceptualized as an addictive behaviour because of the multiple neurobiological mechanisms that facilitate this behaviour. More recently, a project concluded that non-suicidal self-injury shares addiction potential because it contains experiences similar to that of a substance use disorder (Himelein-Wachowiak et al., 2022). This finding is relevant because the authors studied data for a period of 9 years from one of the same reddit communities that was analysed for this thesis. Moreover, the authors report that posts contained jargon similar to that of substance use disorders (“getting clean”, “relapse”, and “recovery”) and nearly 76.8% of posts met the criteria for the DSM-5 Substance Use Disorder (Himelein-Wachowiak et al., 2022). The two most prominent criteria that these posts were found to have were urges/craving (67.6%) and increasing severity/tolerance to self-harm (47.8%). These findings are in line with the subdomains identified in this thesis “urges to relapse” and “tolerance”. Moreover, the phrase “getting clean” can be linked to the subdomain identified as “stop the behavior/seeking advice to abstain”. The subdomains “triggers” and “feelings of relapse” have been found to occur in pre-existing research on relapse studies (Rohsenow & Monti, 1999; Shiffman et al., 1996). Although these studies were on alcohol and nicotine relapse, it is plausible that they do occur also within self-harm. The one interesting subdomain that this thesis identified is the “Abstaining from SH by doing other harmful activities”. Although the frequency of this was 3, these are novel cases that could certainly merit from further research.

Throughout the analysis here conducted, it was found that many members were increasingly inquisitive and curious about different aspects of self-harm. Members often wrote to ask what kind of wound they had, whether their experience was normal, and some were even familiarising themselves with the slang words. This indicates that even though there is information available on these communities, there is still a lack of knowledge about

self-harm among people who self-harm themselves. It is also plausible that these members are seeking reassurance through these posts but do not wish to state that explicitly. Indeed, a recent study even found that people who self-harm were more like to seek reassurance than people who do not (B. J. Turner et al., 2017). Another reasonable possibility is that members who are not familiar with the slang words on these communities could be wanting to familiarize themselves with it to reduce their fear of missing out. Fear of missing out was first defined as a “pervasive apprehension that others might be having rewarding experiences from which one is absent” (Przybylski et al., 2013). It is possible that members who do not know the slang words perceive the members who know the slang words to be a closer and more intimate group, thus bringing a need to learn these words and achieve a sense of belonging.

A recent study (Guccini & McKinley, 2022) looked at the accounts of people who self-harm on Tumblr. They found that members would often make posts indicating their need for validation. People would often enquire whether their cuts were valid, and others would be quick to respond and let them know that all self-harm behaviour was valid. This is in line with what was found in the domain emerged in the present study, namely “Feeling invalid”. While many members would talk about needing to cut deeper in order to feel valid, the comments would inform them that this was not true and that their struggles were valid.

A paper by Davis and Lewis (2019) looked at 500 messages on an online self-harm message board. They found that 66 of these messages contained the theme of “Hiding/Shame”. People who self-harmed felt the need to hide this from their therapists, their significant others or from other people that they interacted with. Not surprisingly, the analysis for this thesis also found members often seeking both excuses and methods to hide/conceal their self-harm.

A recent study by Kendall and colleagues (2021) aimed to understand the experience of living with scars for people who self-injure. The authors found that scars from self-injury

could bring about a host of emotions ranging from shame to affection (Kendall et al., 2021). Moreover, they found two different reactions to the changing physical presence of the scars. Some of the members were concerned with the fading of the scars and some were concerned about the persistence of these scars. In the analysis for this thesis, a sense of ambivalence with regard to scars was certainly present. Members often felt both happy and sad that their scars were fading and would take to the communities to seek reassurance from others.

It is well established that one of the primary functions of self-harm is to regulate unwanted emotions and cope with life stressors (Klonsky, 2007; Lewis & Heath, 2015). Moreover, a study that aimed to understand the reinforcing properties of self-harm found that there was a significant increase in positive feelings after self-harm (Gordon et al., 2010). The analysis for this thesis was in line with this work as the domain of “reinforcement” was also marked with two similar subdomains- “coping/regulation method” and “positive feelings afterward”.

Another domain that merits discussion is “consequences”. A handful of members were found posting on these communities describing the consequences they experienced after the act of self-harm. One of them even said they were being a *“burden on the medical system”*. One research study found that people around the age of 80 who self-harm felt like they were rejected by medical professionals and also experienced some tension when they sought help in the inpatient clinic (Wand et al., 2018). While this study focused on the old demographic, it is plausible that similar feelings are at play when adolescents are evaluating the consequences of their self-harm behaviour.

One reason why people engage in self-harm is to regulate feelings of self-hate/self-deprecation (Hooley & St. Germain, 2014; Klonsky, 2007). This was clear within the domain of “self-deprecation”. Members took to these communities to express their deep self-hate and criticism that in turn lead to urges to self-harm and even suicidal ideations.

Lastly, the dislike for slang is interesting. Although only a handful of those were identified, it indicates that there is a small subsection of members rebelling against the majority usage of slang.

Language and Culture of Self-Harm E-Communities

Moreno and colleagues (2016) studied the usage of ambiguous hashtags that were attached to self-harm content on Instagram. They found that these ambiguous hashtags perhaps allow communities to avoid recognition and maintain their own group secrets. However, one limitation of this study was that they viewed only one single search term and did not account for the diverse nature of self-harm language (Moreno et al., 2016).

Another paper aimed to understand self-harm communities on Tumblr (Guccini & McKinley, 2022). The authors wanted to understand how these groups facilitate interactions and form a community. They wanted to study the practices and mutual understanding that members within this community had developed. During their research, these authors came across the words “styro”, “beans” and “yeet”. They speculate that the words “styro” and “beans” act as codewords in order to disguise the actual meaning being conveyed. While the term “yeet” was considered by these authors as slang that has an in-group meaning different from the out-group (Guccini & McKinley, 2022).

While these findings were consistent with the analysis of slang words for this thesis, the above paper does not consider the other two words “juice” and “butterfly” that this thesis reports. Moreover, they did not include posts only if they consisted of slang words. However, another interesting similarity is that members on Tumblr reacted similarly to these slang words. A few members were embarrassed by them but many of them welcomed it and took to drafting their posts with these words present (Guccini & McKinley, 2022). Lastly, these authors indicate how these words could lead to shared meaning among members and this is

substantiated by the memes on these communities that could only be understood with knowledge of these words. They conclude by saying that being a member of an NSSI community means one should familiarize themselves with the specific language of the community (Guccini & McKinley, 2022).

The findings of this thesis indicate that there is immense potential in the field of slang and self-harm. The social bonding within the in-group via the shared knowledge of this common vocabulary can significantly benefit in-group functioning (Eble, 2012). Guccini and McKinley (2022) note that even though practice-specific vocabulary is common across various communities, self-harm e-communities have the added fear of being discovered that could lead to this heightened need for secrecy. They also note that knowledge of these words could lead to members discovering other self-harm e-Communities and they could use these words to make their own content recognizable (Guccini & McKinley, 2022).

The slang words identified in this thesis occurred across a range of topics. The fact that the analysis for slang words did not show significant differences across domains and subdomains indicates how well integrated these words have become within the two communities that were being studied. While the domains across both communities (C1 and C2) did not significantly differ, the subdomains across both communities did find significant results ($X^2 = 244.9, p = 0.003$). This implies that while the communities seem similar, a deeper analysis shows clear differences between these two communities on the subtopics that they focus on. These intricate and subtle differences could compound into larger group based cultural differences and could have a significant impact on the members subscribed to either community. Elaborate research and knowledge on the language of these communities should be an important focus for the future.

Limitations of the Study

Although this thesis aims to provide a comprehensive assessment of the usage of slang on self-harm e-communities, it is not without its limitations. Firstly, due to the data being collected entirely online in an anonymous method, demographic data could not be evaluated. A more comprehensive understanding could have been possible with the inclusion of variables such as age, gender, education levels etc. Secondly, this thesis could have benefited from a more elaborate analysis of the memes. Memes were a significant part of posts on C2 and a deeper exploration of that could provide more detailed findings. Thirdly, it is difficult to assess suicidal intent through posts on the internet. Therefore, it not possible to exclude that some posts reported information of self-harm behaviour with suicidal intent. Lastly, it is important to mention that members on the internet act with a negotiated identity that they create. It is hence plausible that some of these posts and self-accounts are not entirely credible.

Improving these limitations could further improve the reliability and credibility of the data.

Recommendations for Future Research

This work can serve as the foundation for various essential future research. Research in the field of self-harm is increasingly beginning to involve the lived experiences of people. For instance, Lewis and Hasking (2021) developed a new framework that seeks to integrate these lived experiences by adopting a “Person-centred framework”. One aspect of this approach is that people should reflect the precise language used by a person who self-harms during their interactions with them. This practice could allow people who self-harm to have their experiences validated (Lewis & Hasking, 2021). Future studies could seek to elaborately explore and understand the various nuances and diversity of the linguistics in self-harm

communication. This knowledge would in turn allow clinicians and practitioners to embody a person-centred approach in a holistic manner.

A recent meta-analysis on treatment methods for self-harm did not find specialized treatments to be more effective than treatments as usual (Fox et al., 2020). Fox and her colleagues (2020) call for a novel conceptualization of treatment within self-harm in order to better help people. Future research could aim to understand how usage of slang and self-harm community specific language could better improve treatment methods.

Virtual coaches that are being developed through AI and natural language processing are another interesting avenue that could be explored by researchers. These coaches have been documented to improve well-being, resilience and social support (Auer et al., 2022). For this, virtual coaches are being developed to improve the mental health outcomes for people across various diagnoses. Researchers could aim on developing a virtual coach specifically for self-harm that reflects the participants language and shows elaborate knowledge of self-harm e-community practices.

Chapter 5

Conclusions

Summary of Findings

This thesis had three main questions and in that regard the findings were elaborate and detailed. The first question sought to understand the most prominent slang words across the two communities. The 5 most prominent slang words were “styro”, “beans”, “yeet”, “juice” and “butterfly”.

The second question sought to understand the different content topics in which these slang words occurred. A total of 12 domains and 31 subdomains were identified. These multifaceted topics were found across both communities with varying frequencies.

The last question sought to understand the differences between both communities with regard to the expression of the domains and subdomains. Our analysis found that only the subdomains significantly differed across both communities. However, other interesting differences between both communities have also been observed and possible reasons have been provided.

Implications

The implications of this study are multi-fold. Firstly, clinicians and therapists could significantly benefit from knowledge of self-harm e-communities and the language used in them. Professionals could use this information to quickly build rapport with their patients and strengthen the therapeutic alliance. They can also assess how the individual has developed his/her understanding of self-harm and how that is shaped through interactions on the e-community. This can then be introduced during therapy and explored further. By doing so, the therapist would be able to assess whether the e-community is proving to be supportive and beneficial to the patient or is doing more damage. Also, with an understanding of the e-

community language, they are able to let the patient know that they are in tune with them. This could facilitate more sharing and disclosure during therapy.

Secondly, a knowledge of the language of self-harm could help in building more reliable psychometric tests. Self-harm items on these questionnaires could be altered to include the specific self-harm language that is prevalent on these e-communities.

Lastly, therapists could build their own e-communities where members can come together and discuss their self-harm. With the therapist as a moderator, the chances of false information could be significantly reduced. If therapists could create a safe virtual space where members could come together and share their experiences, it is plausible that their mental health outcomes might improve.

Conclusion

The intent of this thesis was to gain an insight into the language used by self-harm e-communities. During the analysis, two e-communities was evaluated and various different domains and subdomains were identified that contained the range of topics across which the slang words were used. The discussion looked at possible nuances and reasons for differences between the two communities. Limitations and recommendations for future research are outlined. By accounting for these limitations and building on this work, future researchers can develop a more nuanced understanding and treatment of self-harm.

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Appendices

Appendix A

Python Script to determine the most prevalent slang words

```
import praw
import nltk
nltk.download('punkt')
from nltk.tokenize import word_tokenize

# Connect to Reddit API
reddit = praw.Reddit(client_id='',
                    client_secret='',
                    user_agent='')

# Get the 1000 most recent posts and comments from the subreddit
posts = reddit.subreddit("").new(limit=1000)

# Concatenate the text of all posts and comments
text = ""
for post in posts:
    text += post.title + post.selftext
    text = text.lower()

# Tokenize the text
tokens = word_tokenize(text)

# Count the frequency of each word
word_freq = {}
for word in tokens:
    word_freq[word] = word_freq.get(word, 0) + 1

# Filter the dictionary to only include the word of interest
word_of_interest = "yeet"
word_count = word_freq.get(word_of_interest, 0)

# Return the count of occurrences of the word of interest
print("We analysed the last 1000 posts on the subreddit and found that")
print("The word '" + word_of_interest + "' appeared " + str(word_count) + " times.")

word_of_interest2 = "beans"
word_count2 = word_freq.get(word_of_interest2, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest2 + "' appeared " + str(word_count2) + " times.")

word_of_interest3 = "mango"
word_count3 = word_freq.get(word_of_interest3, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest3 + "' appeared " + str(word_count3) + " times.")

word_of_interest4 = "barcode"
word_count4 = word_freq.get(word_of_interest4, 0)
```

```

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest4 + "' appeared " + str(word_count4) +
" times.")

word_of_interest5 = "bedrock"
word_count5 = word_freq.get(word_of_interest5, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest5 + "' appeared " + str(word_count5) +
" times.")

word_of_interest6 = "sewer"
word_count6 = word_freq.get(word_of_interest6, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest6 + "' appeared " + str(word_count6) +
" times.")

word_of_interest7 = "butterfly"
word_count7 = word_freq.get(word_of_interest7, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest7 + "' appeared " + str(word_count7) +
" times.")

word_of_interest8 = "noodles"
word_count8 = word_freq.get(word_of_interest8, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest8 + "' appeared " + str(word_count8) +
" times.")

word_of_interest9 = "pasta"
word_count9 = word_freq.get(word_of_interest9, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest9 + "' appeared " + str(word_count9) +
" times.")

word_of_interest10 = "juice"
word_count10 = word_freq.get(word_of_interest10, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest10 + "' appeared " + str(word_count10)
+ " times.")

word_of_interest11 = "salsa"
word_count11 = word_freq.get(word_of_interest11, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest11 + "' appeared " + str(word_count11)
+ " times.")

word_of_interest12 = "runes"
word_count12 = word_freq.get(word_of_interest12, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest12 + "' appeared " + str(word_count12)
+ " times.")

word_of_interest13 = "enchantment"

```

```
word_count13 = word_freq.get(word_of_interest13, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest13 + "' appeared " + str(word_count13)
+ " times.")

word_of_interest14 = "farms"
word_count14 = word_freq.get(word_of_interest14, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest14 + "' appeared " + str(word_count14)
+ " times.")

word_of_interest15 = "styro"
word_count15 = word_freq.get(word_of_interest15, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest15 + "' appeared " + str(word_count15)
+ " times.")

word_of_interest61 = "sewerslide"
word_count61 = word_freq.get(word_of_interest61, 0)

# Return the count of occurrences of the word of interest
print("The word '" + word_of_interest61 + "' appeared " + str(word_count61)
+ " times.")
```

Appendix B

Python Script to download posts that contain the slang words

```
import praw
import pandas as pd
import nltk
from datetime import datetime, timedelta, timezone

reddit = praw.Reddit(
    client_id='',
    client_secret='',
    user_agent=''
)
pd.set_option('max_colwidth', None)

df = pd.DataFrame(columns=['Title', 'Link', 'Body', 'UpVotes', 'Comments',
'Number of Comments', 'Date'])
df1 = pd.DataFrame(columns=['Title'])
df2 = pd.DataFrame(columns=['Body'])

start_time = datetime.now(timezone.utc) - timedelta(days=90)
subreddit = reddit.subreddit('')
for post in subreddit.search(query='(yeet OR beans OR styro OR juice OR
butterfly OR barcode OR bedrock OR sewerslide)',
                             sort='new', time_filter='year', limit=None):
    if post.created_utc < start_time.timestamp():
        break
    post_text = post.title + " " + post.selftext
    comments = [] # initialize an empty list for comments
    for comment in post.comments.list():
        if isinstance(comment, praw.models.MoreComments):
            continue
        replies = [comment.body]
        for reply in comment.replies.list():
            if isinstance(reply, praw.models.MoreComments):
                continue
            replies.append(reply.body)
        comments.append('\n'.join(replies))
    post_df = pd.DataFrame({
        'Title': post.title,
        'Link': post.url,
        'Body': post.selftext[:10000] + '...' if len(post.selftext) > 10000
else post.selftext,
        'UpVotes': post.score,
        'Comments': '\n\n'.join(comments)[:10000] + '...' if
len('\n\n'.join(comments)) > 10000 else
        '\n\n'.join(comments),
        'Number of Comments': post.num_comments,
        'Date': datetime.fromtimestamp(post.created_utc,
timezone.utc).strftime('%Y-%m-%d %H:%M:%S %Z')
    }, index=[len(df)])
    df = pd.concat([df, post_df], ignore_index=True)
    df1 = pd.concat([df1, pd.DataFrame({'Title': post.title,
index=[len(df1)])])
    df2 = pd.concat([df2, pd.DataFrame({'Body': post.selftext},
index=[len(df2)])])

nltk.download('vader_lexicon')
```

```

from nltk.sentiment.vader import SentimentIntensityAnalyzer as SIA

sia = SIA()

results = []
for line in df1['Title']:
    pol_score = sia.polarity_scores(line)
    pol_score['Title'] = line
    results.append(pol_score)

df1_sentiment = pd.DataFrame.from_records(results)
df1_sentiment = pd.concat([df1, df1_sentiment.drop(['Title'], axis=1)],
axis=1)

results2 = []
for line in df2['Body']:
    pol_score = sia.polarity_scores(line)
    pol_score['Body'] = line
    results2.append(pol_score)

df2_sentiment = pd.DataFrame.from_records(results2)
df2_sentiment = pd.concat([df2, df2_sentiment.drop(['Body'], axis=1)],
axis=1)

df1_sentiment['Label'] = 0
df1_sentiment.loc[df1_sentiment['compound'] > 0.2, 'Label'] = 1
df1_sentiment.loc[df1_sentiment['compound'] < -0.2, 'Label'] = -1

df2_sentiment['Label'] = 0
df2_sentiment.loc[df2_sentiment['compound'] > 0.2, 'Label'] = 1
df2_sentiment.loc[df2_sentiment['compound'] < -0.2, 'Label'] = -1

df.to_csv('MoSFull.csv', encoding='utf-8', index=False)
df1_sentiment.to_csv('MoSTitleSA.csv', encoding='utf-8', index=False)
df2_sentiment.to_csv('MoSBodySA.csv', encoding='utf-8', index=False)

```