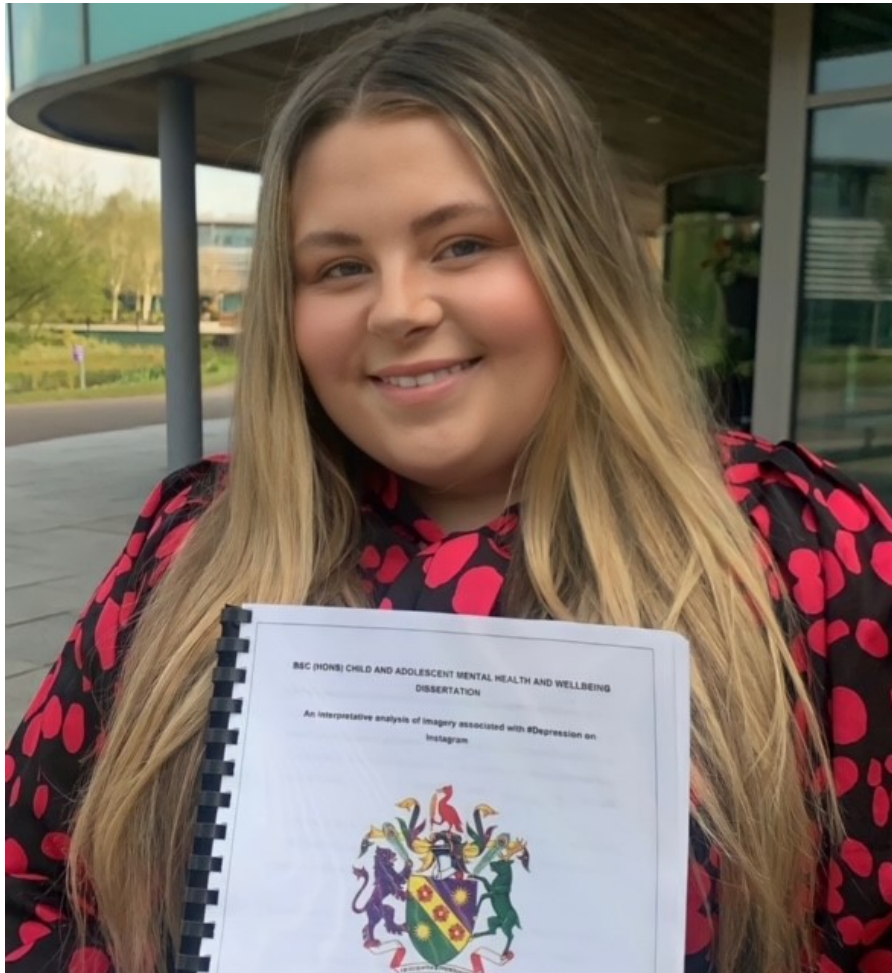# An interpretative analysis of imagery associated with #Depression on Instagram

Olivia Taylor

Olivia is very interested in supporting mental health among children and young people. This arises from Olivia's personal experience with mental health and how the support benefitted her. Olivia has worked with many children and young people, particularly those with complex needs in Rawtenstall. Olivia feels that social media has a significant impact on the mental health of children and young people Olivia's undergraduate dissertation employed a qualitative technique to interpretively analyse images related with the hashtag #Depression on Instagram in order to better understand how people identify specific images with a 'negative' term.

Abstract

Introduction: Existing research shows that viewing images connected with depression-related material can influence an individual's own feelings of depression. Several research studies suggest viewing imagery emphasising a negative outcome intensifies depressed symptoms in people. However, there is limited research examining how young people interact with Instagram and hashtags and what types of images are associated with #Depression.

Methods: Through theoretical sampling, the top one hundred Instagram posts with #Depression was accumulated. By analysing each image and coding these images, depending on their photograph and caption, images were analysed using grounded theory. The study used themes to piece together common patterns from coded data to investigate the association of images related to #Depression.

Results: Four themes emerged from data collection: subjective experiences, emotional reactions, process of change, and forms of expression. These themes all included sub-themes such as death, love, personal experiences and memes.

Conclusion: The researcher discovered #Depression on Instagram was viewed from a positive perspective as the study revealed a large majority of users adopted this hashtag to share personal experiences and promote depression awareness. The researcher also identified Instagram users shared a variety of methods to assist the management of depressive symptoms. The use of memes connected with #Depression was originally viewed as negative, however the study revealed that memes are often used as a form of expression.

Limitations and recommendations: The key limitations of this study include the researchers narrow sample set, which may not be generalisable to the larger population, although the researcher offers justification for these decisions. According to the study, more research with 'generation alpha' is needed, as well as evaluation of other types of social media such as TikTok.

Introduction

Before Instagram is branded as a toxic social media site, there is a compelling need to investigate the range of depression-related material being shared on this platform. Therefore, this dissertation will focus on a non-participatory research study to investigate the link between hashtag use and depression, as well as interpretively analyse images connected with #Depression on Instagram. The findings will be examined, and important discoveries will be identified.

Background to Study

Social Media

Social media is described as a platform of technology that enables individuals to exchange ideas, opinions, and information, as well as construct virtual networks and communities (Appel et al, 2020). According to the Office for National Statistics (2020), 70% of people aged sixteen and over engaged in online activities such as social networking sites in 2020. Whilst Ofcom (2021; p 31) proposes "older social media adults are more likely to have a Facebook profile, whilst younger social media users prefer Instagram". A 2018 report by Commonsense Media revealed 81% of young people use social media, with more than a third accessing social media sites repetitively. The cause of this is perhaps due to the greater accessibility of websites from mobile technology. The findings indicate that social media plays a significant role in a person's everyday life, and that how a person interacts with social media affects their mood and, ultimately, their ability to cope (Centre for Mental Health, 2021). Alongside these statistics, there is an interest in the effects of social media on young people's cognitive development and psychological well-being (American Psychological Association, 2019).

Instagram

With over 700 million active users, Instagram is one of the most popular free sharing platforms for images, videos and conversations (Hunt, 2017). Instagram allows anybody over the age of thirteen to capture and share images and videos with other online users and allows followers to like and comment on posts (Instagram, 2022). Since the launch in 2010, Instagram has become a means of validation for young people, their identities, and their thoughts (Sosik and Bazarova, 2014; Thomas et al, 2017). Roughly 27% of Instagram's global active users are under twenty-four years old (Statista, 2022), indicating more than a third of Instagram users are viewed as the younger generation. This highlights the importance of understanding the use of Instagram and the safety available for young people. While there are millions of young people who are engrossed in social media, the basis for this research focuses on an intriguing, less discussed reason; the link between #Depression and the types of imagery associated with this hashtag.

Mental Health

Mental illness amongst young people is on the rise, with over 337,000 people contacting children and young people's mental health services between October 2020 and September 2021 (NHS Digital, 2021). Although good mental health involves the capacity of being able to think and behave in ways that one wishes (Fusar-Poli et al, 2020), poor mental health can affect one's thinking by making it harder to cope with their feelings and reactions (MIND, 2017). McManus et al (2016) estimates that each week, one in six people would be affected by mental health issues. In support of this, Twenge et al (2019) implies the incidence of young people reporting symptoms consistent with severe depression increased by 52% between 2005 and 2017. Ford, John and Gunnell (2021) also found that rates of probable mental health conditions have rapidly increased since 2017, with at least 16% of children and young people living with probable

mental health conditions. This implies that while the incidence of mental health has increased in previous years, the understanding of influential factors needs to be more developed (OECD, 2021). Evidence has also highlighted the increasing prevalence of mental illness, particularly during the coronavirus pandemic, as research by Zhou et al (2020) indicates that around 21% of people suffered deteriorated mental symptoms during the COVID-19 pandemic.

Depression

According to the World Health Organization (2021), depression is often characterized by gloomy, irritated moods, as well as the loss of pleasure or interest in daily tasks. With depression in children and young people being one of the most common and recurrent mental health conditions (Pile, Shammas and Smith, 2020), Haefner (2016) estimates nearly 8% of young children suffer from depression, due to life experiences, genetic inheritances, academic outcomes, drug abuse or sociocultural models (Bernaras, Jaureguizar and Garaigordobil, 2019; Radez et al, 2021). As reported by Warrender and Milne (2020), social media is one of the most prevalent causes of depression since social comparisons are often pushed, along with poor body image, sleep issues and cyberbullying (Royal Society for Public Health, 2017). According to Festinger (1954), social comparison is a sociological self-esteem in which people get a sense of self through comparing themselves to others. In support of this, McCrae, Gettings and Purssell (2017) conducted a systematic review of eleven studies related to the association between social media usage and depressed symptoms in children and young people. To collect relevant studies, the following search strategy was used: "child/adolescent aged 5-18, social media exposure, and depression/depressive symptoms as an outcome" (McCrae, Gettings and Purssell, 2017: p318). As a result, the researchers found a minor but statistically significant correlation between the two factors. Seabrook (2016) also discovered a link between negative social interactions on social media sites and high levels of depression and anxiety. These

findings indicate that social media can negatively impact mental health and it is important to understand that social media can allow people to become disconnected from their own needs and happiness.

Hashtags

Hashtags are tags or words that begin with '#' to represent the content of a photograph or trend by allowing users to search for images and boost visibility (Giannoulakis and Tsapatsoulis, 2016). The functional goal of hashtags is to provide insight into popular subjects, brand-related information, and participation in campaigns with the possibility to support them through content imagery (Jackson and Welles, 2015; Nam et al, 2017). Ferrara et al (2014) conducted a study on how people use hashtags to annotate photographs, whereby the findings revealed that when annotating an image, individuals use multiple hashtags to convey their emotive description. Instagram hashtags are frequently utilised by producers because they can be used to characterise the visual content of a picture; they can also contribute to metacommunication (Chbeir et al, 2015; Rauschnabele, Sheldon and Herzfeldt, 2019). Hashtags can be used for more than just finding, allowing users to make them metacommunicative. The metacommunicative function, according to Daer et al (2014), can be divided into five codes: 'emphasising', 'iterating', 'critiquing'. 'identifying' and 'rallying'. 'Empathising' relates to drawing attention to something; 'iterating' is used to express humor, and 'critiquing' is used to convey judgement. 'Identifying' is used to relate to the creator's posts, while 'rallying' is applied to raise awareness. However, Gerlitz (2017) suggests one issue with hashtags is how they affect the meaning people make of their use. For example, because of the nature of this research study topic, some people may regard #Depression as a 'risky' hashtag as it can possibly link people to inappropriate content, such as self-harm (McCosker and Gerrard, 2021).

The following literature review will look at existing studies to see whether there are any relationships between Instagram and hashtags.

Review of the Literature

Depending on how an individual interacts with social media may have a beneficial or detrimental effect on their thoughts, emotions or mental process, which can all influence depression (Firth et al, 2019). The influence of passive social media use on depressive symptoms was investigated by Aalbers et al (2019), who studied 132 university students. They observed that people who spent more time passively using social media experienced higher levels of depression, loneliness and hopelessness. As a result, if a person is not actively responding to a social media site, they are less likely to develop depressive symptoms. As the study only included psychology university students, it lacks generalisability to other populations (Aalbers et al, 2019). On the contrary, the study was conducted virtually using an online study participant platform which boosts the ecological validity of the findings, since it can represent more accurately than a laboratory context (Anwyl-Irvine et al, 2021). Online research, particularly questionnaires, are more susceptible to random responses (Chandler and Paolacci, 2017), increasing the risk of false results. Multiple researchers found that studies that have better ecological validity have more trust in the generalisability of results across contexts (Dadurand, Shultz and Onishi, 2008; Logie and Maylor, 2009). Additionally, the study used experience sampling which is a method that observes individuals in their daily life, which is followed by high ecological validity (Ram et al, 2017).

Social media use is found to be associated with increased levels of depressive symptoms, implying that platforms like Instagram may have a significant impact on an individual's mental

health, according to Aalbers et al (2019). A study which explored depression and Instagram was conducted by Reece and Danforth (2017), who used a machine learning tool to identify predictive marks of depression using data from Instagram. They looked at the Instagram data of 166 people and discovered depression indicators may be found in Instagram usage patterns, whereby their depressed signals can be detected in content posted before the date of the first diagnosis (Reece and Danforth, 2017). As a result, the findings point to new paths for early mental disorder screening and identification (Reece and Danforth, 2017). The researchers employed Amazon's Mechanical Turk [MTurk] as a data collection tool, which is comparable to how Aalbers et al (2019) acquired their data. A separate group of MTurk crowd workers, on the other hand, were instructed to score the Instagram photographs gathered, but they were not supplied with any information about the study, nor the research participants mental health. As a result, validity is increased since the crowd workers demonstrated a non-biased viewpoint because no aspects from the research changed their ideas. However, inclusive bias occurs because of the convenience of MTurk crowd workers; researchers are unable to extend the date to match the full population due to this form of bias (Smith and Noble, 2014), which therefore reduces generalisability. The participants viewed photographs from Instagram, which adds to the finding's validity and applicability. However, the researcher conducted two surveys: a depression survey in which participants completed a standardised clinical depression survey, and a healthy survey in which participants were screened for history of depression and active Instagram use (Reece and Danforth, 2017). Although people do not normally fill out surveys before accessing Instagram, this component lowers the validity of the study as it is unrealistic in real life. Nonetheless, the data indicates that the research study confirmed both hypotheses; depression indicators are visible in Instagram user behaviour, and these depressed signals may be detected in posts made prior to the day of initial diagnosis.

Andalibi, Ozturk and Forte (2015) conducted a study in which they evaluated depression-related images on Instagram and their accompanying captions. They wanted to learn more about how photo sharing affects the lives of those with depression. Over the course of a month, they gathered 95,046 depression-tagged photographs and selected 800 posts. The final sample included 788 photos and captions. They discovered that many of the posts indicated the creators have an awareness of their audience, as observed by their frequent use of questions and direct communication with the audience (Andalibi, Ozturk and Forte, 2015). They also discovered many Instagram users submitted photographs requesting help, guidance, and information (Andalibi, Ozturk and Forte, 2015). As a result of using #Depression and accompanying hashtags as semantic markers, the researcher concluded that these people may have a feeling of shared identity (Andalibi, Ozturk and Forte, 2015). This suggests that Instagram is viewed as a community of users who prefer to share interests. Andalibi, Ozturk and Forte (2015) utilised real Instagram comments and photographs to boost ecological validity and make the study more realistic. Although data was acquired using only one search phrase, limiting generalisability; however, the researcher believed their study technique was strong enough to lay the groundwork for studying depression-related photo sharing.

Instagram, on the other hand, can also be viewed as a positive platform for some people. Zyl et al (2020) set out to create and test a short online photography, meaningful moments intervention targeted at improving wellbeing of Instagram users. 220 individuals were recruited over the course of four weeks using various social media platforms and an email, with the final recruiting procedure, resulting in 50 participants following a one-year follow up (Zyl et al, 2020). The studies practical impacts demonstrated declining benefits in terms of medium and long-term increases in wellbeing, such as gratitude and life satisfaction (Zyl et al, 2020). It also demonstrated how interventions may be used to improve wellbeing and control common

mental health disorders in the short term (Zyl et al, 2020). This proves that individuals may perhaps benefit from viewing more positive material on Instagram. During the intervention's launch, it was revealed that Facebook, which also owns Instagram, had illegally sold personal and private data of its users, which may have made participants wary of using social media (Zyl et al, 2020). This might explain why there was such a high percentage of participant dropout and non-response. As a result, the study's validity may be compromised. The study's generalisability is limited since it used a single group, pre-experimental, mixed method longitudinal design (Zyl et al, 2020). On the other hand, conducting a small-scale pilot study to offer researchers with specific, step-by-step instructions for conducting an ethnographic study related to social media would be ideal. However, the researchers sought to learn more about the possibility of using social media in positive psychological therapies.

Rationale

Many people use social media, particularly younger people, to connect and communicate with friends, family, and other people (Rogers, 2019). As people were forced to isolate limiting their contact with others during the COVID-19 pandemic, many people found this daunting and became engrossed in social media since they had no other choice (Volkin, 2020). As people started to share their thoughts and feelings on social media platforms, particularly those linked to mental health and depression, the access rates rapidly increased (Gonzalez-Padilla and Tortolero-Blanco, 2020). Therefore, many literature studies focused on the types of imagery associated with unpleasant emotions and their detrimental influences on the mental health of individuals (Aalbers et al, 2019).

Additionally, most research seemed to focus solely on the influence of Instagram on adults, resulting in findings that cannot be generalised to the wider population. Likewise, many studies

lacked ecological validity since the tasks generated were not generalised to be used in other situations, such as real life (Zyl et al, 2020). As an example, Instagram users would not take part in a survey before accessing the platform.

As this research study will benefit from having publicly accessible content on Instagram, since information may be viewed by a wide range of people, explicit material, such as self-harm can change an individual's belief and mood (Jiang and Ngien, 2020). Therefore, individuals who view self-harm photographs on Instagram connected to #Depression, for example, are more inclined to self-harm themselves (Arendt, Scheer and Romer, 2019). This may help the formulation of a theory as to why various Instagram users associate #Depression with certain materials by gathering non-participatory data. However, a growing body of evidence suggests that Instagram might help people become healthier and happier, depending on the sort of material they are exposed to (Andalibi, Ozturk and Forte, 2015; Zyl et al, 2020).

There is minimal research relating to #Depression on Instagram specifically and what types of images individuals associate with that hashtag, besides from the study conducted by Andalibi, Ozturk and Forte (2015). As a result, it is critical to expand on this understanding and fill the gap within literature. Therefore, this dissertation will take an interpretive analysis around the types of imagery associated to #Depression on Instagram.

Research Question

What types of imagery is associated with #Depression on Instagram?

Aim

- To interpretively analyse imagery associated with #Depression on Instagram.
- To explore the relationships between the use of hashtags and depression.

Methodology

Research Methodology

The aim of this research study is to gain an understanding of images associated with #Depression on Instagram from a qualitative approach. The researcher chose to use a non-participatory study as collecting visual data from social media is viewed more ecologically valid than other traditional approaches (Andreotta et al, 2019). This is because social media data emerges from real-word social environments without any prompts from researchers. Therefore, the researcher will analyse a set of images to identify themes using content analysis.

A qualitative approach was chosen since it complemented the research aims, as imagery analysis can provide an insight into people's thoughts and feelings (Rahman, 2017). According to Denzin (1989), qualitative researchers can acquire an interpretation from detailed descriptions of other people's meanings and actions, which is why using this approach was beneficial. Although qualitative approaches are frequently criticised for researcher bias, as many studies involve the researcher's own interpretations of data based on their theoretical perspective (Sutton and Austin, 2015), this is not a major concern for this research study as the aim is to examine data from the researcher's perspective in order to understand the relationship between #Depression and imagery.

Interpretivist research can provide a full explanation of why people identify #Depression with specific imagery, which is crucial to consider when approaching the study topic. In the broadest definition, interpretivism refers to a methodological approach to social science that focuses on how individuals make sense of the world from their own experiences and viewpoints (Ryan, 2018). Interpretivism is often referred to as idiographic research, which examines specific events from an interpretivist perspective (Gichuru, 2017).

Data Collection

To limit the effects of previously liked and engaged with images on Instagram under #Depression, a new Instagram account was created specifically for the purpose of data collection for this study (Resnik and Elmore, 2018). The researcher used their academic email address and loaned a university laptop to undertake the setup of a new account.

The top one hundred posts uploaded to Instagram under #Depression were collected over a period of one day on Tuesday 8th February 2022 by theoretic sampling. In order to create and refine categories of a new theory, the researcher selected theoretic sampling for discovering and gathering relevant primary data (Charmaz, 2006; p192). By limiting the data collection to less than one hundred images would result in a loss of important findings (Andrade, 2020). Therefore, this data set was collected to ensure the data acquired by the researcher was relevant to the research aims. Additionally, due to the researcher's convenience, the data collection sample was completed late at night.

The sample was taken directly from *Instagram.*com, whereby the researcher screenshotted the image and caption, including the username and accompanying hashtags for each image. For ethical reasons, no personal details identifying the users were collected to ensure the anonymity of those involved, although each post was publicly available on Instagram.

Once the researcher collected the data set, they were saved on the researcher's university OneDrive account. OneDrive was chosen to store data as it complies with the universities data protection regulation. The OneDrive account will be accessed by the researcher and their supervisor only and data will be deleted after one year, as per the university data protection policy (Edge Hill University, 2022).

Data Analysis

In terms of this research study, the researcher employed a grounded theory approach to collect images from #Depression on Instagram, in order to build a phenomenon from an explanatory theory (Birks and Mills, 2015; Tie, Birks, and Francis, 2019). Glaser and Strauss (1967) states that grounded theory aims to develop a theory that is based on data which has been purposefully collected and processed. Grounded theory appeared to be more appropriate for this research study as the researcher determined that codes were required to analyse the data set. Corbin and Strauss (1990) introduced four steps to the approach of grounded theory in terms of coding: open coding, construction of codes, grouping codes into themes and the formulation of a theory. As there is limited pre-existing research on Instagram imagery analysis in relation to hashtags, this data collection will help to contrast a systematic theory (Tie, Birks, and Francis, 2019). However, avoiding researcher-induced bias will be challenging due to the researcher's inability to recognise grounded theory due to their embeddedness (Singh and Estefan, 2018).

Even though grounded theory was the primary approach for this research study, content analysis was also used to analyse images based on the premises than an image is worth a thousand words (Zinko et al, 2020). Content analysis is primarily concerned with the systematic coding and classification of textual data, in order to discover trends and patterns (Gbirch, 2007; Vaismoradi, Turunen and Bondas, 2013). Although there are multiple ways to use content analysis, this research study focused on summative content analysis. Summative content analysis attempts to understand the important context of each image, whilst also aiming to identify the underlying meaning of a particular medium (Hshieh and Shannon, 2005). This form of content analysis will aid the research study's overall aim of interpreting images related to hashtag #Depression on Instagram.

Data was analysed through content analysis by finding themes within the images coding units (Kleinheksel et al, 2020). The researcher created a content analysis table, whereby the

researcher inserted each image into a Word document table with three columns: image type, image purpose, and image code/s, allowing the researcher to develop numerous detailed interpretations about each image (Munn, Tufanaru and Aromataris, 2014). Duplicates (n=2), images with non-English text (n=3), images with captions that did not include #Depression (n=5) were all removed from the data set. Even though these images were not originally screenshotted, the researcher disregarded these images. While content analysis is handled open-mindedly to avoid researcher bias, the researcher is necessary to make choices, such as whether the image of art depicts in a negative or positive light, for it to become a theme (Onwuegbuzie, Leech and Collins, 2008).

Ethical Considerations

Ethical considerations must be addressed in any research study. As this study is classed as primary research, it is critical that ethical approval from the Undergraduate Faculty of Health, Social Care and Medicine Non-Human Research Ethics Committee at Edge Hill University is acquired.

The researcher also needed to evaluate researcher bias as an ethical concern. The term, researcher bias, refers to a researcher's pre-existing beliefs and influences on a subject (Galadas, 2017). Confirmation bias is a type of prejudice among researchers (Schumm, 2021), which arises when researchers select material that confirms their own beliefs, while overlooking alternative opinions on the topic (Peters, 2020). To avoid bias in this study, the researcher examined all data and analysed it with a clear mind without any prior preconceptions. In addition, the researcher interacted with their supervisor using a reflexive approach in order to recognise the integrity of the research process and the quality of generated knowledge (Dodgson, 2019).

Covert research was also an ethical consideration for this study. Covert research occurs when research subjects are unaware of their involvement in a study (Marzano, 2021). As a result, it is crucial to withhold information and conceal the genuine objective and circumstances of research in order to explore the research study. When a researcher acquires data, it is critical to keep information safe for as long as you need it (Yip, Han and Sng, 2016). To avoid this issue, the researcher will only collect data that is publicly available.

Results

After interpreting one hundred images, the researcher developed ninety-nine codes which were inserted into a separate table. By accumulating similar codes from the original data set, the researcher condensed these codes into eighteen sub-themes. The researcher then further extracted the sub-themes into four main themes. All these visual aids assisted the researcher in comprehending themes to support the results section (Vaismoradi, Turunen and Bondas, 2013).

Figure 1 shows how the researcher interpreted the images related with #Depression to establish four core themes: subjective experiences, emotional reactions, process of change, and forms of expression. Even though all images studied were labelled with the hashtag #Depression by their creators, the study found that the amount to which each image was linked to depression differed.
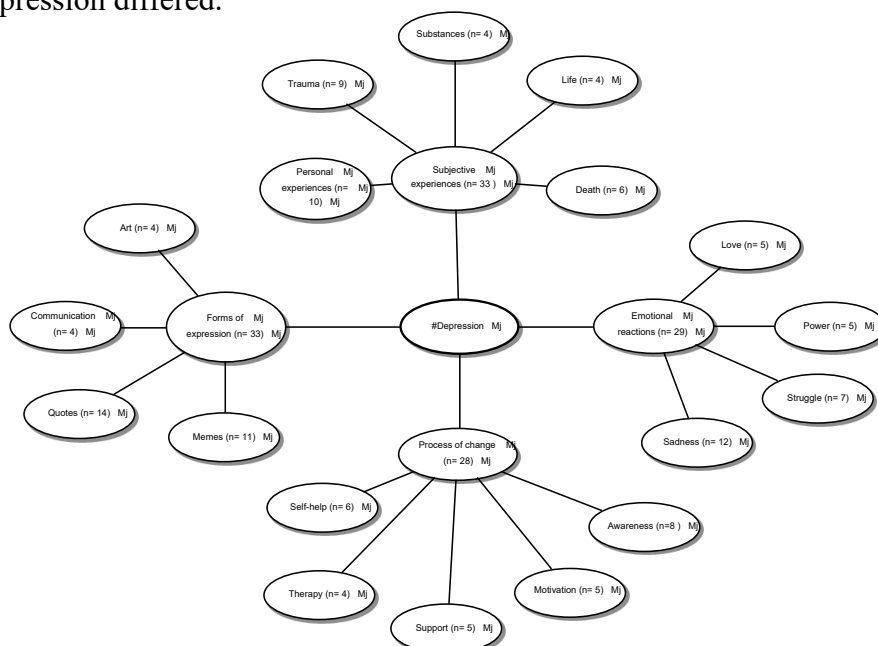

Figure 1: Themes identified across content posted under #Depression on Instagram. The four themes are shown as headings and sub-themes are shown in boxes.

Subjective experiences

The first theme was explored through a large number of images (n= 33). It was discovered that creators typically shared several subjective experiences images which were divided into five sub-themes: death, life, substances, trauma and personal experiences.

The results discovered that a minority of Instagram creators shared death-related images such as suicidal idealization and the intention of harming others through violence (n= 6). As an example, one creator shared an image of a stickman hurting another stickman, which shows a desire to harm others. Whereas, another creator, as seen in figure two, shared an image of a post-it note with words scribbled out and replaced. These two values of suicide are acknowledged in both past and present tense. Therefore, the results uncovered that death experiences frequently emphasise grief, misery and suffering.


Figure 2: Image number 9

Similarly, a number of creators shared their opinions on the types of problems they have experienced from the realities of life (n= 4). In the caption of one image, "When you share your goals and dreams with the world there will be people who give support, people who give advice, and people who give criticism (and everything in between. Remember this: you don't need to take advice from people who don't have the life you want", supporting the need for people to pursue their own paths without the concerns of others.

Substances was another sub-theme developed from a few images that were linked to medicine and alcohol (n= 4). One creator used #Depression as an opportunity to honour depression medication by expressing their positive experience in the caption "One of the best decisions in my life!" and "Self-care is the best care! #RemoveTheStigma".

A select group of Instagrammers used #Depression to convey their trauma stories (n= 9), whereby some creators shared stories relating to generational trauma and how often there is a lot of misconceptions relating to this type of trauma. However, other creators highlighted the impact of trauma on people's behaviour and mood.

The final sub-theme, personal experiences, was recognized as the most significant sub-theme by a number of creators sharing images under #Depression (n= 10). Many creators used this hashtag to share their own experiences of depression and other mental health conditions, whilst also sharing how depression can affect people's daily life and behaviours. For example, one

Figure 3: Image number 36
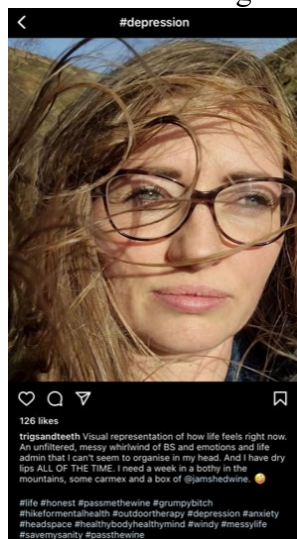
creator as seen in figure three captioned an image of themselves with the solemn expression, "Visual representations of how life feels right now. An unfiltered, messy whirlwind of BS and emotions and life admin that I can't seem to organize in my head". On the other hand, users under #Depression shared images to increase depression awareness, as seen in image number 99 who states "Taken in 2012, during an addiction-driven crisis period, an hour after this picture was taken, I tried to take my own life. Check in with people. Especially those you know may be struggling. Drop them a message. See how they are".

Emotional reactions

The second theme was represented by several creators (n= 29) who typically shared a number of emotional reactions, which were represented by four sub-themes: love, power, sadness and struggle, all of which utilised #Depression to communicate various emotions.

Many Instagram users (n= 5) shared elements of love as identified by the researcher. For example, one creator shared an image of a cartoon woman with visual text referencing the relationship between weight gain and self-love, describing it as "No amount of weight gain, should sink your self love. It's okay to have goals, but… Make peace with your current body". Whereas other creators used the sub-theme love to talk about their significant partner, "You are my favourite person".

Alternatively, other Instagram creators shared images relating to the idea of power such as resilience and recovery (n= 5). As one creator shared an image stating "Resilience is very different than being numb. Resilience means you experience, you feel, you fail, you hurt. You fall. But, you keep going", other creators shared images of how recovery benefited their mental wellbeing under the use of #Depression.

A large number of creators used quotes, poems and memes to communicate sadness (n= 12). With one creator emphasising how sadness makes people feel uncomfortable, "My mind takes me to places I don't want to be. Forcing me to watch things no one should see", other creators explained how being alone makes them overthink their feelings.

In the final sub-theme, struggle, creators shared images relating to their everyday problems and obstacles during recovery (n= 7). One creator acknowledges the effects of trauma on an individual, seen in figure four. While other Instagrammers wanted to raise awareness of recovery through posts that enabled the creator to share their personal experience, such as ""I couldn't have made a better choice" and "Can't recommend him enough", as seen in image number 33.
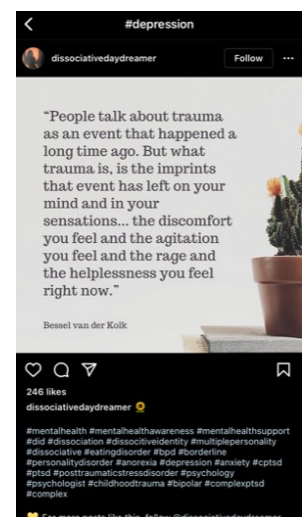

Figure 4: Image number 81

Process of change

Under #Depression, the theme process of change, was identified by multiple creators (n= 29) who described several stages of transformation as underlined by the five sub-themes: awareness, motivation, support, therapy and self-help.

Figure 5: Image number 13

Despite the fact all images were created to engage with an audience under #Depression, one creator repurposed their image to raise awareness about uncomfortable conversations about anxiety and the reality of recovery being a time-consuming process. In figure five, the creator shared an image sharing awareness to other people who may be starting a difficult conversation.

Under the sub-theme of motivation, multiple creators shared their experiences of recovery and coping techniques used for those with depression (n= 5). One creator highlighted the significance of regaining control over life and making the best decision for themselves, as seen in image number 64.

Likewise, support was also considered to be a sub-theme from the researchers analysis as they identified several Instagram creators (n= 5) uploaded images of verbal advice. For example, in figure six, the creator talks about significant trauma and how there are alternative treatment methods available for those with depression.

Figure 6: Image number 95

The sub-theme of therapy featured a variety of images which linked to therapeutic experiences from multiple creators viewpoints (n =4). One creator shared a storyboard image relating to the conversation they had about meeting a therapist, whereas other creators shared images relating to the benefits of therapy.
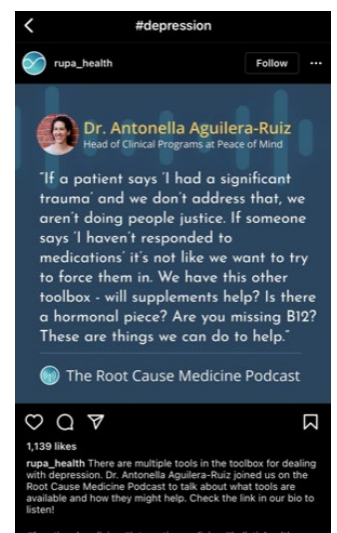
This follows on into the final sub-theme, self-help, which consisted of a number of creators who shared their self-help experiences, advice and tips in their posts (n= 6). One creator shared an image of a boat in water with the caption, ""Up north in Canada, doctors are prescribing a minimum of two hours per week in nature for patients battling mental disorders like anxiety and depression", raising awareness of another country in how they are taking the steps to cost-effectively reduce symptoms of depression. Other creators under this sub-theme shared images of self-help tips such as cleaning.

Forms of expression

The final theme, forms of expression, included images of expressive aspects that were used to communicate distinct thoughts (n= 33), divided into four sub-themes: art, communication, memes and quotes.

Figure 7: Image number 31

Under the sub-theme of art, Instagram creators shared several images (n= 4) which expressed depressive experiences through artistic mediums, such as paintings and drawings. One creator shared an image of a stone sculpture that was used to represent the shape of a human, along with supported text "How it truly feels to live with a mental illness…". While other Instagrammers shared images relating to communication (n= 4). One creator shared an illustration relating to the questions a person with bipolar disorder may receive, as seen in figure seven.

Figure 8: Image number 55

The sub-theme, memes, on the other hand was often expressed by Instagram users under #Depression as these creators wanted to share a comedic value relating to depression. Figure eight shows an image of a meme relating to endometritis education. Although this image contains #Depression, it shows the audience that there are a range of other factors which can impact the formation of depression in individuals.

A strong majority of creators (n= 14) shared images of quotes under #Depression. Creators shared images relating to trauma occurring by chance, reassuring quotes to help individuals suffering from depression to rediscover themselves, and supportive quotes for those struggling with recovery.

<u>Discussion</u>

The aim of this study was to explore the relationship between the use of #Depression and associated imagery, applying grounded theory and content analysis methods to interpret the images collected via the social media platform, Instagram. The researcher sampled one hundred images, coding their interpretations of each image and collapsing the codes into sub-themes and themes. The four themes overall interpreted from the images were: subjective experiences, emotional reactions, process of change, and forms of expression. The results suggest that while all of the images examined were hashtagged #Depression by their creator, there was a diverse range of content submitted under this hashtag, revealing a wide spectrum of elements of depression.

An initial analysis of the one hundred images collected involved the researcher interpreting the content and type of images associated with #Depression on Instagram, the researcher established many images consisted of cartoon graphics, 'selfies', educational materials and memes. Through this initial analysis, it was clear that visual imagery was commonly used as a vehicle for expressing and communicating the concept of depression; with the researcher identifying that only a few images were based predominantly on textual captions. Importantly, many images included opportunities for potential coping mechanisms such as cleaning and seeking interaction. In support of this, a study conducted by Pilkington and Wieland (2020) identified the use of pets and animals, relaxation interventions and exposure to sunlight, all aided individuals to cope with anxiety and depression by themselves.

The researcher also identified that many Instagram users shared images under #Depression to gain a sense of shared identity. Although Bailey et al (2020) suggest that users on social media platforms frequently share the perspective of their online identities by presenting 'fake' versions of themselves, the findings of this study imply that many creators shared the perspective of their true selves by sharing their own personal experiences with #Depression. As seen in figure nine, one creator shared their personal experience of depression and how it is important to check up on people who may be struggling. In support of this awareness, Bucci et al (2019) suggest that online peer support can help individuals establish new relationships, feel less alone or connected with people. Therefore, the researcher identified that users who do share personal experiences under #Depression may view Instagram as a safe community, which is supported from the literature of Andalibi, Ozturk and Forte (2015).
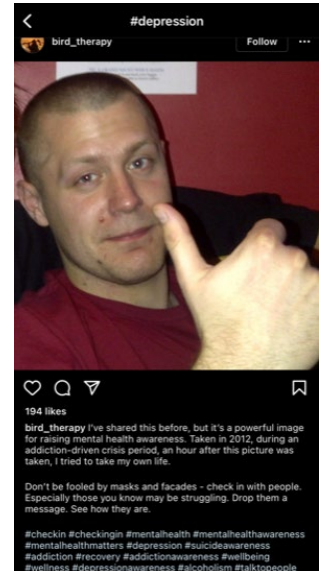

Figure 9: Image number 99

One of the themes highlighted in this study was the use of #Depression to indicate or communicate about the process of change. The results from this theme revealed that people found a purpose to share therapeutic experiences from the perspective of recovery, such as talking therapies including Cognitive Behavioural Therapy [CBT]. Talking therapies are often used for the treatment of depression as they can provide an alternative form of expression and communication, particularly for those in the younger generation (National Institute for Health and Care Excellence, 2019). One creator shared an image relating to group therapy and how it takes time for individuals to prepare themselves beforehand. The study discovered that many users decided to speak about their therapy on Instagram using #Depression, which may be attributed to the lower level of stigma associated with therapeutic interventions. According to Rossler (2016), stigma is universal, although it manifests differently in individuals due to cultural influences. In many non-Western countries, for example, supernatural explanations for

mental illness are still prevalent (Ran et al, 2021). This might explain why there is such a high dropout rate, as people may find it difficult to discuss their mental illness and engage in continuous, therapeutic treatment (Dixon, Holoshitz and Nossel, 2016). However, as society has grown more understanding of mental health difficulties and more supportive of those with issues, it has become more normal for people to communicate about their mental illness (NHS Digital, 2018). Therefore, the results from this study identified that Instagram users are open to discuss their experiences of depression and therapy under #Depression.

Another common finding of images with #Depression was the use of motivational quotes and poems. According to Turk (2019), the use of motivational messages on social media platforms is increasing, which may be seen positively; nevertheless, many of these messages originate from creators who are struggling to support themselves. As a result, although some Instagram creators share motivational quotes with other users, it could be argued that this is an opportunity for both the creator and the reader to enhance their self-esteem, while also influencing others to raise their self-awareness via empowerment. As supported by Thomas et al (2020), if more users submit encouraging quotes and poetry, the findings of this study might define Instagram as a helpful online community. These results also build on existing literature from Andalibi, Ozturk and Forte (2015) who identified many Instagram users who shared supportive content as they were aware and thinking of their audience. On the other hand, it is also important to consider the way motivational quotes are perceived by children and adolescents. While Instagram users appear to regularly correlate #Depression with motivating posts, Bedrov and Bulaj (2018) argue that motivational quotes may not always positively deliver signals and may even exacerbate difficulties. As noted by Pendry and Salvatore (2015), this highlights the importance of adolescents participating in online communities and receiving feedback on activities that can create a sense of social validation and connection to other users. The discovery of motivational quotes and poems from this study suggest that Instagram has the

potential to become an inspiring social media platform by portraying #Depression in a positive light, by supporting one another, and by instilling hope in those who are struggling; however, it is important to consider how these types of images can lead to an unrealistic world (Gokhale, 2012).

Another interesting finding from this research study indicated that many Instagram users include hashtags for the purpose of metacommunication. As metacommunication occurs between a sender with an accompanying message to a receiver (Haan et al, 2021), the purpose of metacommunication on Instagram would be to post an image with a caption for the reader to view. Although the researcher was not looking for metacommunicative functions, it was evident that this was a common concept identified within the images. The results found that Instagram could be used as a metacommunicative platform as many images referred to the five functions of metacommunication. Under the theme, forms of expression, many Instagram users shared images relating to expressive arts which would identify under the function of 'rallying' and 'iterating', as the posts drew attention from the purpose of comedic values. Likewise, the images under the theme of subjective experiences considered all metacommunicative functions. Therefore, this study supports the claim of Daer et al (2014) by suggesting metacommunicative values can provide an insight into the relationship between the type of imagery posted and #Depression.

Figure 10: Image number 86

Although previous research found that Instagram users experience higher levels of depressive symptoms from viewing negative content online (Faelens et al, 2021; Adeyanju et al, 2021), the results from this research study identified that many users wanted to purposely share happier and healthier content, such as their recovery celebrations from treatment and therapy related to depression. For example, the creator of figure ten intentionally shared their celebrations around medication and how it enabled them to overcome their suffering by their loved ones supporting them in terms of how they can seek help. According to Moran et al. (2012), discussing recovery achievements can help people transform their stigmatised views into a source of information. Similarly, Nurser et al (2018) suggest that individuals who receive a recovery narrative that includes components of personal experience can gain personal inspiration, enhanced empathy and understanding (Deegan, 1988), and validation of challenging personal experiences (Williams et al, 2018). In contrast, Rennick-Egglestone (2019) found evidence for the opposite effect, where the sharing of personal recovery stories can also contribute to recipient distress, such as if the reader feels angry that they have experienced greater hardship than the creator. Therefore, the type of personal content creators shares on Instagram under #Depression should be aware that their story may impact in a helpful and harmful way on those who read their stories.

The researcher also identified images posted to Instagram under #Depression can influence the management of depression symptoms into adulthood. Images under the process of change theme were largely focused on the shift from depression being viewed negatively to depression being viewed positively. One example of this was viewed in figure eleven, the image demonstrates how the use of organising clutter can be viewed as a self-help technique for those with depression. In support of this, a study conducted by Latha et al (2020) demonstrates individuals could be positively influenced by other people's Instagram posts through the sharing of depression-supportive material. Although this is often viewed as a positive meaning, Foland-Ross and Gotlib (2012) suggests individuals who suffer from depression are more vulnerable to interpret information in a negative manner.
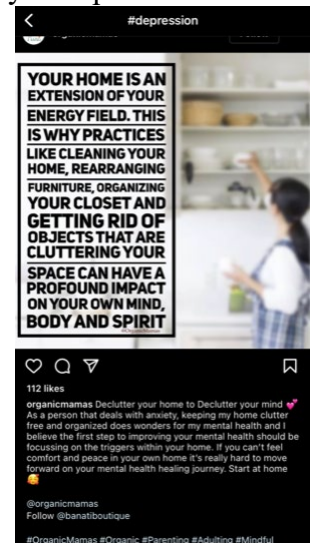

Figure 11: Image number 57

Therefore, individuals with depression who view Instagram posts under #Depression may misinterpret the true meaning of the image. Kaiser et al (2015) suggests this may occur in individuals with depression as they are more inclined to ruminate about the same, overthinking thoughts.

On the contrary, the research study sheds a new light on the link between sadness and memes, as the researcher identified around a quarter of images under #Depression related to the format of memes. According to Chadwick and Platt (2018), humour is seen as a fundamental component of human relationships; so, Instagram creators employed humour on a regular basis to compose a comic value related to depression, maybe due to the popularity of comedic posts on Instagram (Al-Rawi et al, 2021). Although there are many different sorts of humour that people can convey, this study discovered a lot of people using gallows humour. Gallows humour, sometimes known as black humour, is a comedic value that use bitter enjoyment to address foreboding subjects such as death and illness, as well as to portray upsetting things in more humorous terms (Willinger et al, 2020). While gallows humour can be considered as a

self-protective function, namely a beneficial coping mechanism for those suffering from mental illness (Christopher, 2015), the frequent use of gallows humour may read as a cry for help (Craun and Bourke, 2014). These results might suggest that Instagram creators who extensively used depression-related gallows humour may lack in offline support, as identified by Papousek et al (2017). Based on the findings of previous studies by Gelkopf (2009), a more plausible explanation is that gallows humour can be employed as a useful coping tool. Overuse of coping techniques, on the other hand, can result in them becoming defence mechanisms (Panfil et al, 2020).

Within this study, the findings shown that some images under #Depression could be triggering to some people, for example death-related images which was identified six times. Due to the small number of images identified as explicit, the researcher did not detect this as a prevalent trend. However, as suggested by Nicklin, Swain and Lloyd (2020), the sharing of death-related images is often difficult to track and stop and by raising concerns about the safety of these images in the view of young people on Instagram demands more attention. This finding was also reported by multiple researchers who have highlighted their worries about spreading of explicit material to those individuals who interact with it (Moreno et al, 2016; Brown et al, 2017; Miguel et

Figure 12: Instagram Sensitive Content Warning

al, 2017). It may be the case that Instagram users sharing posts with #Depression are purposefully attempting to share graphic images to accumulate a specific type of audience (Fedushko and Kolos, 2019). To prohibit depression-related content online without supressing information that helps recovery and fosters a supportive community is particularly necessary for Instagram as many of their users are young individuals. On the contrary, following through with the limitations of explicit content would go against the concept of free speech which Instagram supports through their community guidelines (Instagram, 2022). Therefore,
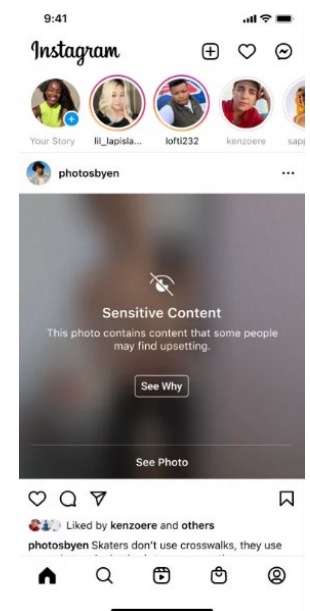
Instagram launched a new artificial intelligence warning system in to challenge the free speech of their users by notifying creators when their captions on an image "may be considered offensive" and give them "a change to pause and reconsider their words before posting" (Instagram, 2019). Instagram also introduced a sensitive content control in 2021 which notifies users when they view posts that "may contain content that some people may find upsetting" by limiting the visibility of certain posts that have been flagged by the Instagram community for containing sensitive content, as seen in figure twelve (Instagram, 2021). Similarly, sharing personal experiences of struggle and recovery should be encouraged and emphasised rather than all depression-related material being censored (Naslund et al, 2020). The beneficial applications of social media should be investigated and promoted to provide online support, connect individuals with common experiences and identify users who may benefit from resources, as suggested by Jolly et al (2019) and Lu et al (2021). Within this research study, the researcher identified that the share of personal experiences was viewed from a positive light as many Instagram users attempted to normalise the condition of depression, as seen in figure thirteen.

Although all images in this study were labelled with #Depression, many of these images also

Figure 23: Image number 94.

had a variety of additional hashtags applied to them, such as #Endthestigma and #Bipolardisorder. According to Shen et al. (2018), depression is frequently misdiagnosed as other mental health conditions, such as bipolar disorder. Therefore, the researcher discovered that there were no posts that only contained #Depression, indicating that Instagram creators understand depression is frequently comorbid with other conditions (Steffen et al, 2020). In support of this, one creative provided an image depicting how love is a choice rather than a sensation, particularly for people suffering from borderline personality disorder [BPD]. Although this graphic shares BPD-related content with the hashtag

#Depression, Rao and Broadbear (2019) say depression is a prevalent symptom of BPD, thus authors would be wise to acknowledge #Depression with this type of content. This was a regular occurrence in many Instagram images tagged with #Depression. As a result, Instagram users who share depression-related images may explore a link between depression and other mental health issues. Individuals may become aware, through educational posts, that depression is considered as multi-dimensional (Vares et al, 2015).

While previous research has focused on the negative types of content associated with depression online (Karim et al, 2020; Keles, McCrae and Grealish, 2019), the result from this study demonstrates that #Depression shares a positive connotation for individuals exploring this hashtag. Results from this study indicate a large number of images under #Depression purposefully aimed to educate and support depression awareness by displaying recovery as an empowering element through sharing personal experiences and promoting therapeutic processes, as interpreted by the researcher. In support of this, Andalibi, Ozturk and Forte (2015) identified similar results by suggesting users on Instagram insisted on seeking and providing advice, support and information to others.

Conclusion

While significant rates of depression amongst young people have been documented by Haefner (2016) and Pile, Shammas and Smith (2020), this study discovered that the role of #Depression focused on a positive connotation by promoting awareness and support for depression. This includes Instagram users sharing personal experiences with depression, users revealing their struggles with recovery and how they overcome them, and Instagram users sharing motivational quotes and poems for other users to connect and feel inspired by. There were, however, a number of counterbalancing methods to the management of depression found by the researcher's interpretation of images associated with #Depression. Self-help activities such as cleaning and exposure to outdoor environments were among these strategies. Despite the fact that self-help approaches have not been previously described in the literature, this distinguishes the finding as being unique to this study.

Although previous research has highlighted concerns that Instagram users could access explicit content relating to #Depression, the study discovered that this issue was not detected as there was a small minority of images associated with this hashtag. However, explicit content was shown in other materials such as memes. As the objective of a meme is to share content with a comedic value, the researcher discovered that many posts referred to gallows humour, which was more unique to this study because the current generation of Instagram creators use memes as a form of expression. On the other hand, many Instagram users uploaded depression-related content that was healthier and happier, such as resilience and recovery celebrations. Strong connections have been extensively established in the literature as beneficial to people suffering from depression, with researcher such as Andalibi, Ozturk and Forte (2015) and Zyl et al (2020), discovering that many people share images of guidance and support.

This research has revealed four key themes interpreted from images with the #Depression: subjective experiences, emotional reactions, process of change, and forms of expression. In light of these themes, the researcher has contributed new knowledge and bridged gaps in understanding the association between hashtag use and depression by interpretively analysing images related to the hashtag #Depression on Instagram.

According to the research, there is evidence that individuals with depression who view this hashtag on Instagram may be influenced by the type of content other users post and to a lesser extent, can influence the management of negative traits associated with depression that can continue into adulthood.

Limitations

Content is shown under hashtags on Instagram according to a unique algorithm, therefore, the top one hundred posts are not necessarily the most recent, as Instagram algorithm takes into account engagement levels such as likes and comments, hashtag popularity, and how soon a post generates engagement (Mosseri, 2021). As a result, the data gathered was most likely based on a variety of factors. Given that the display algorithm takes into consideration previously liked or engaged material, it is feasible that the content examined in this study reflects a "default" display setting, given that a fresh account was created only for the purpose of collecting data. Additionally, the use of this algorithm may affect the replicability of this study as if another researcher searched the same hashtag today, they are most likely to identify a different set of one hundred images.

Another limitation of this study is that only a specific sample set was collected due to the research aims and question. For that reason, the data collected may not be representative of the wider use of #Depression on Instagram; however, the researcher chose this approach due to the project's limited timeframe and the goal of gaining an understanding of the phenomena rather

than creating generalizable outcomes. As the researcher used publicly available posts, this study only reflects on a sample of creators who intended their posts to be publicly viewed.

Additionally, the fact that this study only had one researcher was also seen as a drawback. When a researcher reaches a point when no new analysis can be gathered from more data, they will rely on the conversations of other researchers, which is also referred to as data saturation (Saunders et al, 2018). This would make this research study biased as it only follows one opinion from the singular researcher.

Recommendations

Based on the current research, it is recommended that studies should look at the effects of creators using #Depression on other social media platform to see whether there is a similar use. Additionally, it would be interesting to note whether these users contribute to new perspectives of depression-related content. Due to time restrictions and strict adherence to the inclusion and exclusion criteria, this was not feasible in this study.

It is also recommended that future study should also look at how newer social media platforms such as TikTok may be used to mainstream a range of depression experiences, promote depression awareness, and establish a supportive online community for individuals who are struggling with depression.

Furthermore, as highlighted in the PrakashYadav and Rai (2017) study, additional research with online social media users is needed, since they are regarded as 'generation Z', the group that is a strong contributor and is highly creative with online information and visuals. In their upbringing, this generation of users has been exposed to an unprecedented quantity of technology.

References

AALBERS, G., MCNALLY, R J., HEEREN, A., DE-WIT, S. and FRIED, E I., 2019. Social Media and Depression Symptoms: A Network Perspective. *Journal of Experimental Psychology: General* [online]. 148 (8), 1451-1462. Available from: https://content.apa.org/record/2018-61357-001 [Accessed: 31/01/22]

ADEYANJU, G C., SOLFA, R P., TRAN, T L., WOHLFARTH, S., BUTTNER, J., OSOBAJO, O A. and OTITOJU, A., 2021. Behavioural symptoms of mental health disorders such as depression among young people using Instagram: a systematic review. *Translational Medicine Communications* [online]. 6 (15), pp 1-13. Available from: https://transmedcomms.biomedcentral.com/track/pdf/10.1186/s41231-021-00092-3.pdf [Accessed: 17/04/22]

AL-RAWI, A., SIDDIQI, M., LI, Z., VANDAN, N. and GREPIN, K., 2021. A thematic analysis of Instagram's gendered memes on COVID-19. *Journal of Visual Communication in Medicine* [online]. 44 (4), pp 137-150. Available from: https://www.tandfonline.com/doi/epub/10.1080/17453054.2021.1941808?needAccess=true [Accessed: 05/04/22]

AMERICAN PSYCHOLOGICAL ASSOCIATION, 2019. *Social media's growing impact on our lives* [online]. Available from: https://www.apa.org/members/content/social-media-research [Accessed: 26/01/22]

ANDALIBI, N., OZTURK, P. and FORTE, A., 2015. Depression-related Imagery on Instagram. *Proceedings of the ACM Conference on Computer Supported Cooperative Work* [online]. pp 231-234. Available from: https://dl.acm.org/doi/10.1145/2685553.2699014 [Accessed: 02/02/22]

ANDRADE, C., 2020. Sample size and its importance in research. *Indian Journal of Psychological Medicine* [online]. 42 (1), pp 102-103. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6970301/#:~:text=A%20sample%20that%20is%20larger%20than%20necessary%20will,and%20expense%20involved%20in%20recruiting%20the%20extra%20patients. [Accessed: 11/03/22]

ANDREOTTA, M., NUGROHO, R., HURLSTONE, M J., BOSCHETTI, F., FARRELL, S., WALKER, I. and PARIS, C., 2019. Analyzing social media data: A mixed-methods framework combining computational and qualitative text analysis. *Behavior Research Methods* [online]. 51, pp 1766-1781. Available from: https://link.springer.com/content/pdf/10.3758/s13428-019-01202-8.pdf [Accessed: 06/04/22]

ANWYL-IRVINE, A., DALMAIJER, E S., HODGES, N. and EVERSHED, J K., 2021. Realistic precision and accuracy of online experiment platforms, web browsers, and devices. *Behaviour Research Methods* [online]. 53, pp 1407-1425. Available from: https://link.springer.com/content/pdf/10.3758/s13428-020-01501-5.pdf [Accessed: 31/01/22]

APPEL, G., GREWAL, L., HADI, R. and STEPHEN, A T., 2020. The future of social media in marketing. *Journal of the Academy of Marketing Science* [online]. 48 (1), pp 79-95. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7222052/pdf/11747_2019_Article_695.pdf [Accessed: 26/01/22]

ARENDT, F., SCHERR, S. and ROMER, D., 2019. Effects of exposure to self-harm on social media: Evidence from a two-wave panel study among young adults. *New Media and Society* [online]. 21 (11-12), pp 2422-2442. Available from: https://journals.sagepub.com/doi/10.1177/1461444819850106 [Accessed: 02/02/2022]

BAILEY, E R., MATZ, S C., YOUYOU, W. and IYENGAR, S S., 2020. Authentic self-expression on social media is associated with greater subjective wellbeing. *Nature Communications* [online]. 11 (4889), pp 1-9. Available from: https://www.nature.com/articles/s41467-020-18539-w.pdf [Accessed: 16/04/22]

BEDROV, A., BULAJ, G., 2018. Improving Self-Esteem with Motivational Quotes: Opportunities for Digital Health Technologies for People with Chronic Disorders. *Frontiers in Psychology* [online]. 9 (2126), pp 1-5. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6224439/pdf/fpsyg-09-02126.pdf [Accessed: 05/04/22]

BERNARAS, E., JAUREGUIZAR, J. and GARAIGORODOBIL, M., 2019. Child and Adolescent Depression: A Review of Theories, Evaluation Instruments, Prevention Programs, and Treatments. *Frontiers in Psychology* [online]. 10 (543), pp 1-24. Available from: https://www.frontiersin.org/articles/10.3389/fpsyg.2019.00543/full [Accessed: 07/04/22]

BIRKS, M. MILLS, J., 2015. *Grounded theory: a practical guide.* 2nd ed. London: SAGE UK. [Accessed: 20/02/22]

BROWN, R C., FISCHER, T., GOLDWICH, A D., KELLER, F., YOUNG, R. and PLENER, P L., 2017. #cutting: Non-suicidal self-injury (NSSI) on Instagram. *Psychological Medicine* [online]. 48, pp 337-346. Available from: https://www.cambridge.org/core/journals/psychological-medicine/article/cutting-nonsuicidal-selfinjury-nssi-on-instagram/600ED6C6856EE21B7E875F08CB088DDB [Accessed: 05/04/22]

BUCCI, S., SCHWANNAUER, M. and BERRY, N., 2019. The digital revolution and its impact on mental health care. *Psychology and Psychotherapy: Theory, Research and Practice*

[online]. 92 (2), pp 277-297. Available from: https://bpspsychub.onlinelibrary.wiley.com/doi/10.1111/papt.12222 [Accessed: 16/04/22]

CENTRE FOR MENTAL HEALTH, 2021. *Anxiety, loneliness and Fear of Missing Out: The Impact of Social Media on young people's mental health* [online]. Available from: https://www.centreformentalhealth.org.uk/blogs/anxiety-loneliness-and-fear-missing-out-impact-social-media-young-peoples-mental-health [Accessed: 26/01/22]

CHADWICK, D D., PLATT, T., 2018. Investigating Humour in Social Interaction in People With Intellectual Disabilities: A Systematic Review of the Literature. *Frontiers in Psychology* [online]. 9 (1745), pp 1-16. Available from: https://www.frontiersin.org/articles/10.3389/fpsyg.2018.01745/full [Accessed: 05/04/22]

CHANDLER, J J. and PAOLACCI, G., 2017. Lie for a Dime: When Most Pre-screening Responses are Honest but Most Study Participants are Impostors. *Social Psychological and Personality Science* [online]. 8 (5), pp 500-508. Available from: https://journals.sagepub.com/doi/10.1177/1948550617698203 [Accessed: 31/01/22]

CHARMAZ, K., 2006. *Constructing Grounded Theory*. Thousand Oaks, CA: SAGE. [Accessed: 10/03/22]

CHBEIR, R., MANOLOPOULOS, Y., MAGLOGIANNIS, I. and ALHAJJ, R., 2015. *Artificial Intelligence Applications and Innovations: 11th IFIP WG 12.5 International Conference, AIAI 2015, Bayonne, France, September 14-17, 2015, Proceedings* [online]. New York City: Springer. Available from: https://books.google.co.uk/books?id=Pl14CgAAQBAJ&pg=PA208&lpg= [Accessed: 27/01/22]

CHRISTOPHER, S., 2015. An introduction to black humour as a coping mechanism for student paramedics. *Journal of Paramedic Practice* [online]. 7 (12), pp 610-615. Available from:

https://www.researchgate.net/publication/285582173_An_introduction_to_black_humour_as_a_coping_mechanism_for_student_paramedics [Accessed: 05/04/22]

COMMON SENSE MEDIA, 2018. *Social Media, Social Life 2018* [online]. Available from: https://www.commonsensemedia.org/sites/default/files/uploads/research/2018-social-media-social-life-infographic-final.pdf [Accessed: 26/01/22]

CORBIN, J., STRAUSS, A., 1990. Grounded Theory Research: Procedures, Canons, and Evaluative Criteria. *Qualitative Sociology* [online]. 13(1), pp 3-21. Available from: https://med-fom-familymed-research.sites.olt.ubc.ca/files/2012/03/W10-Corbin-and-Strauss-grounded-theory.pdf [Accessed: 09/03/22]

CULLY, J A., DAWSON, D B., HAMER, J. and THARP, A L., 2020. *A providers guide to Brief Cognitive Behavioural Therapy* [online]. Department of Veterans Affairs South Central MIRECC: Houston, TX. Available from: https://www.mirecc.va.gov/visn16/docs/therapists_guide_to_brief_cbtmanual.pdf [Accessed: 11/04/22]

DAER, A R., HOFFMAN, R. and GOODMAN, S., 2014. Rhetorical Functions of Hashtag Forms Across Social Media Applications. *Proceedings of the 32nd ACM International Conference on The Design of Communication CD-ROM* [online]. 16, pp 1-3. Available from: https://dl.acm.org/doi/10.1145/2666216.2666231 [Accessed: 23/11/21]

DANDURAND, F., SHULTZ, T R. and ONISHI, K H., 2008. Comparing online and lab methods in a problem-solving experiment. *Behaviour Research Methods* [online]. 40 (2), pp 428-434. Available from: https://link.springer.com/content/pdf/10.3758/BRM.40.2.428.pdf [Accessed: 31/01/22]

DEEGAN, P E., 1988. Recovery: The lived experience of rehabilitation. *Psychosocial Rehabilitation Journal* [online] 11 (4), pp 11-19. Available from: https://doi.apa.org/doiLanding?doi=10.1037%2Fh0099565 [Accessed: 17/04/22]

DENZIN, N K., 1989. *Interpretive interactionism.* Newbury Park, CA: Sage. [Accessed: 18/02/22]

DIXON, L B., HOLOSHITZ, Y. and NOSSEL, I., 2016. Treatment engagement of individuals experiencing mental illness: review and update. *World Psychiatry* [online]. 15 (1), pp 13-20. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4780300/pdf/WPS-15-13.pdf [Accessed: 16/04/22]

DODGSON, J E., 2019. Reflexivity in Qualitative Research. *Journal of Human Lactation* [online]. 35 ("), pp 220-222. Available from: https://journals.sagepub.com/doi/pdf/10.1177/0890334419830990 [Accessed: 24/03/22]

EDGE HILL UNIVERSITY, 2022. *Leaving University- Student Account Closure* [online]. Available from: https://www.edgehill.ac.uk/guides/leaving-university/ [Accessed: 30/03/22]

FAELENS, L., HOORELBEKE, K., CAMBIER, R., PUT, J., PUTTE, E V., RAEDT, R. and KOSTER, E H W., 2021. The relationship between Instagram use and indicators of mental health: A systematic review. *Computers in Human Behaviour Reports* [online]. 4 (100121), pp 1-18. Available from: https://reader.elsevier.com/reader/sd/pii/S2451958821000695?token=8505296C50563ECFFE34C3FFAC8E581AD80A440AE2BEC356A75B08B5FA92C8BAC1035E4239D7262B424550EFB0FB1F42&originRegion=eu-west-1&originCreation=20220417150928 [Accessed: 17/04/22]

FARRARA, E., INTERDONATO, R. and TAGARELLI, A., 2014. *Proceedings of the 25th ACM Conference on Hypertext and Social Media* [online]. Pp 24-34. Available from: https://dl.acm.org/doi/10.1145/3341105.3373956[Accessed: 23/11/21]

FEDUSHKO, S., KOLOS, S., 2019. Effective Strategies for Using Hashtags in Online Communication. *International Journal of Computing and Related Technologies* [online]. 2 (2), pp 82-90. Available from: https://arxiv.org/ftp/arxiv/papers/1909/1909.01474.pdf [Accessed: 16/04/22]

FESTINGER, L., 1954. A Theory of Social Comparison Processes. *Human Relations* [online]. 7 (2), pp 117-140. Available from: https://journals.sagepub.com/doi/10.1177/001872675400700202 [Accessed: 27/01/22]

FIRTH, J., TOROUS, J., STUBBS, B., FIRTH, J A., STEINER, G Z., SMITH, L., ALVAREZ-JIMENEZ, M., GLEESON, J., VANCAMPFORT, D., ARMITAGE, C J. and SARRIS, J., 2019. The "online brain": how the Internet may be changing our cognition. *Official Journal of the World Psychiatric Association* [online]. 18 (2), pp 119-129. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6502424/ [Accessed: 22/02/22]

FOLAND-ROSS, L C., GOTLIB, I H., 2012. Cognitive and neural aspects of information processing in major depressive disorder: an integrative perspective. *Frontiers in Psychology* [online]. 3 (489), pp 1-17. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3495336/pdf/fpsyg-03-00489.pdf [Accessed: 17/04/22]

FUSAR-POLI, P., PABLO, G S., MICHELI, A D., NIEMAN, D H., CORRELL, C U., KESSING, L V., PFENNING, A., BECHDOLF, A., BORGWARDT, S., ARRANGO, C. and AMELSVOORT, T V., 2020. What is good mental health? A scoping review. *European Neuropsychopharmacology* [online]. 31, pp 33-46. Available from:

https://reader.elsevier.com/reader/sd/pii/S0924977X19318693?token=82EB4F809A32FA5C ABCDDF2D564A314924A9D18E3E004E61085E61E0DFD6A45B69578D9E82C8C04399 BEDED1C3A0C05C&originRegion=eu-west-1&originCreation=20220127002305 [Accessed: 27/01/22]

GALDAS, P., 2017. Revisiting Bias in Qualitative Research: Reflections on its relationship with funding and impact. *International Journal of Qualitative Methods* [online]. 16 (1), pp 1-2. Available from: https://journals.sagepub.com/doi/pdf/10.1177/1609406917748992 [Accessed: 11/03/22]

GAUTAM, M., TRIPATHI, A., DESHMUKH, D. and GAUR, M., 2020. Cognitive Behavioural Therapy for Depression. *Indian Journal of Psychiatry* [online]. 62 (Suppl 2), pp 223-229. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7001356/#__ffn_sectitle [Accessed: 05/04/22]

GBRICH, C., 2007. *Qualitative Data Analysis: An Introduction*. 1st ed. London: SAGE Publications. [Accessed: 09/03/22]

GELKOPF, M., 2009. The use of humour in serious mental illness: a review. *Evidence-Based Complementary and Alternative Medicine* [online]. 2011 (342837), pp 1-8. Available from: ECAM2011-342837.pdf (nih.gov) [Accessed: 11/04/22]

GERLITZ, C., 2017. Data point critique. IN: SCHAFER, M T. and ES, K V. *The Datafield Society: Studying Culture Through Data* [online]. pp 241-244. Amsterdam: Amsterdam University Press. Available from: https://library.oapen.org/handle/20.500.12657/31843 [Accessed: 26/10/21

GIANNOULAKIS, S. and TSAPATSOULIS, N., 2016. Evaluating the descriptive power of Instagram hashtags. *Journal of Innovation in Digital Ecosystems 3* [online]. 3(2), p 114-129.

Available from: https://www.sciencedirect.com/science/article/pii/S2352664516300141 [Accessed: 21/10/21]

GICHURU, M J., 2017. The Interpretive Research Paradigm: A Critical Review of Is Research Methodologies. *International Journal of Innovative Research and Advanced Studies* [online]. 4 (2), pp 1-5. Available from: http://www.ijiras.com/2017/Vol_4-Issue_2/paper_1.pdf [Accessed: 19/02/22]

GLASER, B., STRAUSS, A., 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Research.* Mill Valley, CA: Sociology Press. [Accessed: 05/03/22]

GOKHALE, M., 2012. The Implications of Simplification in "Inspirational Literature". *International Journal of Social Science and Humanity* [online]. 2 (5), pp 400-404. Available from: http://ijssh.org/papers/134-W00031.pdf [Accessed: 16/04/22]

GONZALEZ-PADILLA, D A., TORTOLERO-BLANCO, L., 2020. Social media influence in the COVID-19 Pandemic. *International Braz Jurol* [online]. 46 (Suppl 1), pp 120-124. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7719982/pdf/1677-6119-ibju-46-s01-0120.pdf [Accessed: 09/03/22]

GUO, T., SU, J., HU, J., AALBERG, M., ZHU, Y., TENG, T. and ZHOU, X., 2021. Individuals vs. Group Cognitive Behaviour Therapy for Anxiety Disorder in Children and Adolescents: A Meta-Analysis of Randomized Controlled Trials. *Frontiers in Psychiatry* [online]. 12 (674267), pp 1-10. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8564073/pdf/fpsyt-12-674267.pd [Accessed: 05/04/22]

HAAN, D D., HOOGDALEM, A V., ZEIJLEMANS, K. and BOOM, J., 2021. Metacommunication in social pretend play: two dimensions. *International Journal of Early Years Education* [online]. 29 (4), pp 405-419. Available from:

https://www.tandfonline.com/doi/pdf/10.1080/09669760.2020.1778451?casa_token=sEZZlW

rzdnYAAAAA:jX6djuK6JpKIkzMsn-

JyyUKbGEvxzabDzjPFoUb5Uajw6XwFoHiHfqsyVJf9-dbMyiIe5TXLlKuJZA   [Accessed:

16/04/22]

HAEFNER, J., 2016. Primary care management of depression in children and adolescents. *The

Nurse   Practitioner*   [online].   41   (6),   pp   38-45.   Available   from:

https://www.researchgate.net/publication/323126476_Primary_care_management_of_depress

ion_in_children_and_adolescents [Accessed: 07/04/22]

HSIEH, H., SHANNON, S E., 2005. Three Approaches to Qualitative Content Analysis.

Qualitative   Health   Research   [online].   15(9),   pp   1277-1288.   Available   from:

https://journals.sagepub.com/doi/pdf/10.1177/1049732305276687 [Accessed: 09/03/22]

HUNT, 2017. What is Instagram actually for these days? Is it any good? *The Guardian* [online].

15   May.   Available   from: https://www.theguardian.com/culture/2017/may/12/what-is-

instagram-actually-for-these-days-is-it-any-good [Accessed: 08/03/21]

INSTAGRAM, 2019. *Our Progress on Leading the Fight Against Online Bullying* [online].

Available   from: https://about.instagram.com/blog/announcements/our-progress-on-leading-

the-fight-against-online-bullying [Accessed: 16/04/22]

INSTAGRAM, 2021. *Introducing Sensitive Content Control* [online]. Available   from:

https://about.instagram.com/blog/announcements/introducing-sensitive-content-control

[Accessed: 16/04/22]

INSTAGRAM,   2022.   *Community   Guidelines*   [online].   Available   from:

https://help.instagram.com/477434105621119 [Accessed: 16/04/22]

INSTAGRAM, 2022. *Our Features* [online]. Available from: https://about.instagram.com/features [Accessed: 26/01/22

INSTAGRAM, 2022. *Why am I seeing a warning before I can view a photo or video on Instagram?* [online]. Available from: https://help.instagram.com/188848648282410?helpref=uf_permalink [Accessed: 16/04/22]

JACKSON, S J. and WELLES, B F., 2015. Hijacking #myNYPD: Social Media Dissent and Networked Counterpublics. *Journal of Communication* [online]. 65 (1), pp 931-952. Available from: https://onlinelibrary.wiley.com/doi/epdf/10.1111/jcom.12185 [Accessed: 16/11/21]

JIANG, S., NGIEN, A., 2020. The Effects of Instagram Use, Social Comparison, and Self-Esteem on Social Anxiety: A Survey Study in Singapore. *Social Media + Society* [online]. 6 (2), pp 1-10. Available from: https://journals.sagepub.com/doi/pdf/10.1177/2056305120912488 [Accessed: 09/03/22]

JOLLY, E., TAMIR, D I., BURUM, B. and MITCHELL, J P., 2019. Wanting without enjoying: The social value of sharing experiences. *PLoS ONE* [online]. 14 (4), pp 1-23. Available from: https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0215318&type=printable [Accessed: 05/04/22]

KAISER, B N., HAROZ, E E., KOHRT, B A., BOLTON, P A., BASS, J K. and HINTON, D E., 2015. "Thinking too much": A Systematic Review of Common Idiom of Distress. *Social Science and Medicine* [online]. 147, pp 170-183. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4689615/pdf/nihms738484.pdf [Accessed: 17/04/22]

KARIM, F., OYEWANDE, A., ABDALLA, L F., EHSANULLAH, R C. and KHAN, S., 2020. Social Media Use and Its Connection to Mental Health: A Systematic Review. *Cureus* [online].

12 (6), pp 1-9. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7364393/pdf/cureus-0012-00000008627.pdf [Accessed: 16/04/22]

KELES, B., MCCRAE, N. and GREALISH, A., 2019. A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. *International Journal of Adolescence and Youth* [online]. 25 (1), pp 79-93. Available from: https://www.tandfonline.com/doi/full/10.1080/02673843.2019.1590851 [Accessed: 16/04/22]

KLEINHEKSEL, A J., ROCKICH-WINSTON, N., TAWFIK, H. and WYATT, T R., 2020. Qualitative research in pharmacy education: Demystifying content analysis. *American Journal of Pharmaceutical Education* [online]. 84 (1), pp 1-11. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7055418/pdf/ajpe7113.pdf [Accessed: 11/03/22]

LATHA, K., MEENA, K S., PRAVITHA, M R., DASGUPTA, M. and CHATURVEDI, S K., 2020. Effective use of social media platforms for promotion of mental health awareness. *Journal of Education and Health Promotion* [online]. 9 (124), pp 1-6. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7325786/pdf/JEHP-9-124.pdf [Accessed: 17/04/22]

LOGIE, R H. and MAYLOR, E A., 2009. An internet study of perspective memory across adulthood. *Psychology and Aging* [online]. 24 (3), pp 767-774. Available from: https://doi.apa.org/doiLanding?doi=10.1037%2Fa0015479 [Accessed: 31/01/22]

LU, Y., PAN, T., LIU, J. and WU, J., 2021. Does Usage of Online Social Media Help Users With Depressed Symptoms Improve Their Mental Health? Empirical Evidence From an Online Depression Community. *Frontiers in Public Health* [online]. 8 (581088), pp 1-13. Available

from: https://www.frontiersin.org/articles/10.3389/fpubh.2020.581088/full [Accessed: 05/04/22]

MARZANO, M., 2021. *Ethical Issues in Covert, Security and Surveillance Research* [online]. Emerald Publishing Limited: West Yorkshire, England. Available from: https://www.emerald.com/insight/content/doi/10.1108/S2398-601820210000008005/full/pdf?title=covert-research-ethics [Accessed: 30/03/22]

MCCOSKER, A., GERRARD, Y., 2021. Hashtagging depression on Instagram: Towards a more inclusive mental health research methodology. *New Media and Society* [online]. 23 (7), pp 1899-1919. Available from: https://eprints.whiterose.ac.uk/159334/1/Hashtagging%20depression%20on%20Instagram_Revised%20Feb%202020.pdf [Accessed: 28/03/22]

MCCRAE, N., GETTINGS, S. and PURSSELLL, E., 2017. Social Media and Depressive Symptoms in Childhood and Adolescence: A Systematic Review. *Adolescent Research Review* [online]. 2 (4), pp 315-330. Available from: https://www.researchgate.net/publication/314172005_Social_Media_and_Depressive_Symptoms_in_Childhood_and_Adolescence_A_Systematic_Review [Accessed: 27/01/22]

MCMANUS, S., BEBBINGTON, P., JENKINS, R. and BRUGHA, T., 2016. *Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey 2014* [online]. Leeds: NHS Digital. Available from: https://webarchive.nationalarchives.gov.uk/ukgwa/20171010183932tf_/http://content.digital.nhs.uk/catalogue/PUB21748/apms-2014-full-rpt.pdf [Accessed: 27/01/22]

MIGUEL, E M., CHOU, T., GOLIK, A., CORNACCHIO, D., SANCHEZ, A L., DESERISY, M. and COMER, J S., 2017. Examining the scope and patterns of deliberate self-injurious

cutting content in popular social media. *Depression and Anxiety* [online]. 34 (9), pp 786-793. Available from: https://onlinelibrary.wiley.com/doi/10.1002/da.22668 [Accessed: 05/04/22]

MIND, 2017. *Understanding mental health problems* [online]. Available from: https://www.mind.org.uk/media-a/2942/mental-health-problems-introduction-2017.pdf [Accessed: 27/01/22]

MORENO, M A., TON, A., SELKIE, E. and EVANS, Y., 2016. Secret Society 123: Understanding the Language of Self-Harm on Instagram. *Journal of Adolescent Health* [online]. 58 (1), pp 78-84. Available from: https://www.sciencedirect.com/science/article/pii/S1054139X15003717?via%3Dihub [Accessed: 05/04/22]

MOSSERI, A., 2021. *Shedding More Light on How Instagram Works* [online]. Available from: https://about.instagram.com/blog/announcements/shedding-more-light-on-how-instagram-works [Accessed: 28/03/22]

MUNN, Z., TUFANARU, C. and AROMATARIS, E., 2014. Data Extraction and Synthesis. *American Journal of Nursing* [online]. 114 (7), pp 49-54. Available from: https://journals.lww.com/ajnonline/fulltext/2014/07000/jbi_s_systematic_reviews__data_extraction_and.28.aspx [Accessed: 11/03/22]

NAM, H., JOSHI, Y V., KANNAN P K., 2017. Harvesting Brand Information from Social Tags. *Journal of Marketing* [online]. 81(1), pp 88-108. Available from: https://journals.sagepub.com/doi/pdf/10.1509/jm.16.0044 [Accessed: 16/11/21]

NASLUND, J A., BONDRE, A., TOROUS, J., ASCHBRENNER, K A., 2020. Social Media and Mental Health: Benefits, Risks, and Opportunities for Research and Practice. *Journal of Technology in Behavioural Science* [online]. 5, pp 245-257. Available from: https://link.springer.com/content/pdf/10.1007/s41347-020-00134-x.pdf [Accessed: 05/04/22]

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE, 2019. *Depression in children and young people: identification and management* [online]. Available from: https://www.nice.org.uk/guidance/ng134/resources/depression-in-children-and-young-people-identification-and-management-pdf-66141719350981 [Accessed: 05/04/22]

NHS DIGITAL, 2018. *The past, present and future of innovation in mental health* [online]. Available from: https://digital.nhs.uk/blog/transformation-blog/2018/the-past-present-and-future-of-innovation-in-mental-health [Accessed: 16/04/22]

NHS DIGITAL, 2021. *Mental Health Services Monthly Statistics, Final September 2021* [online]. Available from: https://digital.nhs.uk/data-and-information/publications/statistical/mental-health-services-monthly-statistics/final-september-2021 [Accessed: 27/01/22]

NICKLIN, L L., SWAIN, E. and LLOYD, J., 2020. Reactions to Unsolicited Violent, and Sexual, Explicit Media Content Shared over Social Media: Gender Differences and Links with Prior Exposure. *International Journal of Environmental Research and Public Health* [online]. 17 (4296), pp 1-9. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7345319/pdf/ijerph-17-04296.pdf [Accessed: 05/04/22]

NURSER, K P., RUSHWORTH, I., SHAKESPEARE, T. and WILLIAMS, D., 2018. Personal storytelling in mental health recovery. *Mental Health Review Journal* [online]. 23 (1), pp 25-36. Available from: https://www.emerald.com/insight/content/doi/10.1108/MHRJ-08-2017-0034/full/pdf?title=personal-storytelling-in-mental-health-recovery [Accessed: 17/04/22]

OECD, 2021. *Tackling the mental health impact of the COVID-19 crisis: An integrated, whole of society response* [online]. Available from: https://read.oecd-

ilibrary.org/view/?ref=1094_1094455-bukuf1f0cm&title=Tackling-the-mental-health-impact-of-the-COVID-19-crisis-An-integrated-whole-of-society-response [Accessed: 27/01/22]

OFCOM, 2021. *Online Nation: 2021 Report* [online]. Available from: https://www.ofcom.org.uk/__data/assets/pdf_file/0013/220414/online-nation-2021-report.pdf [Accessed: 26/01/22]

OFFICE FOR NATIONAL STATISTICS, 2020. *Internet access- households and individuals* [online]. Available from: https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinter netandsocialmediausage/datasets/internetaccesshouseholdsandindividualsreferencetables [Accessed: 26/01/22]

ONWUEGBUZIE, A J., LEECH, N L. and COLLINS, K M T., 2008. Interviewing the Interpretive Researcher: A method of addressing the Crises of Representation, Legitimation, and Praxis. *International Journal of Qualitative Methods* [online]. 7 (4), pp 1-17. Available from: https://journals.sagepub.com/doi/pdf/10.1177/160940690800700401 [Accessed: 11/03/22]

PANFIL, A., FRANDES, M., NIRESTEAN, A., HURMUZ, M., LUNGEANU, D., CRISTANOVICI, M., LEMETI, L., ISAC, A., PAPAVA, I. and BREDICEAN, C., 2020. Interrelation between defensive mechanisms and coping strategies in psychiatry trainees in Romania: a multicenter study. *Annals of General Psychiatry* [online]. 19 (56), pp 1-9. Available from: https://annals-general-psychiatry.biomedcentral.com/track/pdf/10.1186/s12991-020-00307-1.pdf [Accessed: 16/04/22]

PAPOUSEK. I., RUCH, W., ROMINGER, C., KINDERMANN, E., SCHEIDL, K., SCHULTER, G., FINK, A. and WEISS, E M., 2017. The Use of Bright and Dark Types of

Humour is Rooted in the Brain. *Scientific Reports* [online]. 7 (42967), pp 1-8. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5314334/pdf/srep42967.pdf [Accessed: 18/04/22]

PATINO, C M. FERREIRA, J C., 2018. Inclusion and exclusion criteria in research studies: definitions and why they matter. *Jornal Brasileiro de Pneumologia* [online]. 44 (2), pp 84. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6044655/pdf/1806-3756-jbpneu-44-02-00084.pdf [Accessed: 22/02/22]

PENDRY, L F., SALVATORE, J., 2015. Individual and social benefits of online discussion forums. *Computers in Human Behaviour* [online]. 50, pp 211-220. Available from: https://www.sciencedirect.com/science/article/pii/S074756321500268X [Accessed: 05/04/2022]

PETERS, U., 2020. What is the function of Confirmation Bias? *Erkenntnis* [online]. pp 1-16. Available from: https://link.springer.com/content/pdf/10.1007/s10670-020-00252-1.pdf [Accessed: 11/03/22]

PILE, V., SHAMMAS, D. and SMITH, P., 2020. Assessment and treatment of depression in children and young people in the United Kingdom: Comparison of access to services and provision at two time points. *Clinical Child Psychology and Psychiatry* [online]. 25 (1), pp 119-132. Available from: https://journals.sagepub.com/doi/pdf/10.1177/1359104519858112 [Accessed: 07/04/22]

PILKINGTON, K., WIELAND, L S., 2020. Self-care for anxiety and depression: a comparison of evidence from Cochrane reviews and practice to inform decision-making and priority-setting. *BMC Complementary Medicine and Therapies* [online]. 20 (247), pp 1-15. Available from:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7418416/pdf/12906_2020_Article_3038.pdf

[Accessed: 15/04/22]

PRAKASHYADAV, G., RAI, J., 2017. The Generation Z and their Social Media Usage: A Review and Research Outline. *Global Journal of Enterprise Information System* [online]. 9 (2), pp 110- 118. Available from: https://www.researchgate.net/publication/318005826_The_Generation_Z_and_their_Social_Media_Usage_A_Review_and_a_Research_Outline [Accessed: 28/03/22]

RADEZ, J., REARDON, T., CRESWELL, C., LAWRENCE, P J., EVODKA-BURTON, G. and WAITE, P., 2021. Why do children and adolescents (not) seek and access professional help for their mental health problems? A systematic review of quantitative and qualitative studies. *European Child and Adolescent Psychiatry* [online]. 30, pp 183-211. Available from: https://link.springer.com/content/pdf/10.1007/s00787-019-01469-4.pdf [Accessed: 07/04/22]

RAHMAN, S., 2017. The Advantages and Disadvantages of Using Qualitive and Quantitative Approaches and Methods in Language "Testing and Assessment" Research: A Literature Review. *Journal of Education and Learning* [online]. 6 (1), pp 1-11. Available from: https://files.eric.ed.gov/fulltext/EJ1120221.pdf [Accessed: 23/03/22]

RAM, N., BRINBERG, M., PINCUS, A L. and CONROY, D E., 2017. The Questionable Ecological Validity of Ecological Momentary Assessment: Considerations for Design and Analysis. *Research in Human Development* [online]. 14 (3), pp 253-270. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6317726/pdf/nihms-1502686.pdf [Accessed: 31/01/22]

RAN, M., HALL, B J., SU, T T., PRAWIRA, B., BRETH-PETERSEN, M., LI, X. and ZHANG, T., 2021. Stigma of mental illness and cultural factors in Pacific Rim region: a systematic review. *BMC Psychiatry* [online]. 21 (8), pp 1-16. Available from:

https://bmcpsychiatry.biomedcentral.com/track/pdf/10.1186/s12888-020-02991-5.pdf

[Accessed: 16/04/22]

RAO, S., BROADBEAR, J., 2019. Borderline personality disorder and depressive disorder. *Australasian Psychiatry* [online]. 27 (6), pp 573-577. Available from: https://journals.sagepub.com/doi/pdf/10.1177/1039856219878643 [Accessed: 16/04/22]

RAUSCHNABELE, P A., SHELDON, P. and HERZFELDT, E., 2019. What motivates users to hashtag on social media? *Psychology and Marketing* [online]. 36(1), pp 1-16. Available from:

https://www.researchgate.net/publication/330398001_What_motivates_users_to_hashtag_on _social_media [Accessed: 16/11/21]

REECE, A G., DANFORTH, C M., 2017. Instagram photos reveal predictive markers of depression. *EPJ Data Science* [online]. 6 (15), pp 1-12. Available from: https://epjdatascience.springeropen.com/track/pdf/10.1140/epjds/s13688-017-0110-z.pdf

[Accessed: 02/02/22]

RENAUD, J., RUSSELL, J J. and MYHR, G., 2014. Predicting who benefits most from cognitive-behavioral therapy for anxiety and depression. *Journal of Clinical Psychology* [online]. 70 (10), pp 924-932. Available from: https://onlinelibrary.wiley.com/doi/epdf/10.1002/jclp.22099 [Accessed: 05/04/22]

RENNICK-EGGLESTONE, S., RAMSAY, A., MCGRANAHAN, R., LLEWELLYN-BEARDSLEY, J., HUI, A., POLLOCK, K., REPPER, J., YEO, C., NG, F., ROE, J., GILLARD, S., THORNICROFT, G., BOOTH, S. and SLADE, M., 2019. The impact of mental health recovery narratives on recipients experiencing mental health problems: Qualitative analysis and change model. *PLoS ONE* [online]. 14 (12), pp 1-23. Available from:

https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0226201&type=printable [Accessed: 17/04/22]

RESNIK, D B., ELMORE, S A., 2018. Conflict of Interest in Journal Peer Review. *Toxicologic Pathology* [online]. 46 (2), pp 112-114. Available from: https://journals.sagepub.com/doi/pdf/10.1177/0192623318754792 [Accessed: 09/03/22]

ROGERS, J., 2019. Social media, research and impact. *BioResources* [online]. 14 (3), pp 5022-5024. Available from: https://bioresources.cnr.ncsu.edu/wp-content/uploads/2019/05/BioRes_14_3_5022_Editorial_Rogers_Social_Media_15669.pdf [Accessed: 09/03/22]

ROSSLER, W., 2016. The stigma of mental disorders. *The European Molecular Biology Organisation* [online]. 17 (9), pp 1250-1253. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5007563/ [Accessed: 16/04/22]

ROYAL SOCIETY FOR PUBLIC HEALTH, 2017. *Status of Mind: Social Media and Young People's Mental Health and Wellbeing* [online]. Available from: https://www.rsph.org.uk/static/uploaded/d125b27c-0b62-41c5-a2c0155a8887cd01.pdf [Accessed: 28/01/22]

RYAN, G., 2018. Introduction to positivism, interpretivism and critical theory. *Nurse Researcher* [online]. 25 (4), pp 14-20. Available from: https://www.researchgate.net/publication/323811451_Introduction_to_positivism_interpretivism_and_critical_theory [Accessed: 19/02/22]

SAUNDERS, B., SIM, J., KINGSTONE, T., BAKER, S., WATERFIELD, J., BARTLAM, B., BURROUGHS, H. and JINKS, C., 2018. Saturation in qualitative research: exploring its conceptualization and operationalization. *Quality and Quantity* [online]. 52 (4), pp 1893-1907.

Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5993836/ [Accessed: 11/03/22]

SCHUMM, W R., 2021. Confirmation bias and methodology in social science: an editorial. *Marriage and Family Review* [online]. 57 (4), pp 285-293. Available from: https://www.tandfonline.com/doi/epub/10.1080/01494929.2021.1872859?needAccess=true [Accessed: 25/03/22]

SEABROOK, E M., KERN, M L. and RICKARD, N S., 2016. Social Networking Sites, Depression, and Anxiety: A Systematic Review. *JMIR Mental Health* [online]. 3 (4), pp 1-19. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5143470/ [Accessed: 14/12/21]

SHEN, H., ZHANG, L., XU, C., ZHU, J., CHEN, M. and FANG, Y., 2018. Analysis of Misdiagnosis of Bipolar Disorder in An Outpatient Setting. *Shanghai Archives of Psychiatry* [online]. 30 (2), pp 93- 101. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5936046/pdf/sap-30-93.pdf [Accessed: 05/04/22]

SINGH, S., ESTEFAN, A., 2018. Selecting a Grounded Theory Approach for Nursing Research. *Ethics, Theoretical Development, or Methodological Development Article* [online]. 5, pp 1-9. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6174650/pdf/10.1177_2333393618799571.pdf [Accessed: 08/03/22]

SMITH, J., NOBLE, H. 2014. Bias in research. *Evidence-Based Nursing* [online]. 17 (4), pp 100-106. Available from: https://pureadmin.qub.ac.uk/ws/portalfiles/portal/126780610/EBNBiasFINALJuly2014.pdf [Accessed: 02/02/22]

SOSIK, V S. BAZAROVA, N N., 2014. Relational maintenance on social network sites: How Facebook communication predicts relational escalation. *Computers in Human Behaviour* [online]. 35, pp 124-131. Available from: https://www.sciencedirect.com/science/article/abs/pii/S0747563214001125?via%3Dihub [Accessed: 21/02/22]

STATISTA, 2022. *United Kingdom Instagram Users 2021, by age group* [online]. Available from: https://www.statista.com/statistics/1018012/instagram-users-united-kingdom/ [Accessed: 26/01/22]

STEFFEN, A., NUBEL, J., JACOBI, F., BATZING, J. and HOLSTIEGE, J., 2020. Mental and somatic comorbidity of depression: a comprehensive cross-sectional analysis of 202 diagnosis groups using German nationwide ambulatory claims data. *BMC Psychiatry* [online]. 20 (142), pp 1-15. Available from: https://bmcpsychiatry.biomedcentral.com/track/pdf/10.1186/s12888-020-02546-8.pdf [Accessed: 16/04/22]

STRAUSS, A., CORBIN, J., 1994. Grounded theory methodology. In DENZIN, N and LINCOLN, Y. (eds). *Handbook of qualitative research.* pp 273-285. Thousand Oaks, CA: SAGE. [Accessed: 11/03/22]

SUTTON, J. AUSTIN, Z., 2015. Qualitative Research: Data Collection, Analysis and Management. *The Canadian Journal of Hospital Pharmacy* [online]. 68 (3), pp 226-231. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4485510/ [Accessed: 19/02/22]

THOMAS, L., BRIGGS, P., HART, A. and KERRIGAN, F., 2017. Understanding social media and identity work in young people transitioning to university. *Computers in Human Behaviour* [online]. 76, pp 541-553. Available from: https://www.sciencedirect.com/science/article/pii/S0747563217304892 [Accessed: 22/02/22]

THOMAS, V L., CHAVEZ, M., BROWNE, E N. and MINNIS, A M., 2020. Instagram as a tool for study engagement and community building among adolescents: A social media pilot study. *Digital Health* [online]. 6, pp 1-13. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7081469/pdf/10.1177_2055207620904548.pdf [Accessed: 16/04/22]

TIE, Y C., BIRKS, M. and FRANCIS, K., 2019. Grounded theory research: A design framework for novice researchers. *SAGE Open Medicine* [online]. 7 (), pp 1-8. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6318722/pdf/10.1177_2050312118822927.pdf [Accessed: 18/02/22]

TUMASANG, S S., 2022. Motivational Quotes on Social Media: A Rhetorical Appraisal. *International Journal of Linguistics Studies* [online]. 2 (1), pp 8-18. Available from: https://al-kindipublisher.com/index.php/ijlss/article/view/2734 [Accessed: 05/04/22]

TURK, V., 2019. *How inspirational quotes became a whole social media industry* [online]. Available from: https://www.wired.co.uk/article/inspirational-quote-industry [Accessed: 05/04/22]

TWENGE, J M., COOPER, A B., JOINER, T E., DUFFY, M E. and BINAU, S G., 2019. Age, Period, and Cohort Trends in Mood Disorder Indicators and Suicide-Related Outcomes in a Nationally Representative Dataset, 2005-2017. *Journal of Abnormal Psychology* [online]. 128 (3), pp 185-199. Available from: https://www.apa.org/pubs/journals/releases/abn-abn0000410.pdf [Accessed: 27/01/22]

VAISMORADI, M., TURUNEN, H. and BONDAS, T., 2013. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing and Health Sciences* [online]. 15, pp 398-405. Available from: https://onlinelibrary.wiley.com/doi/epdf/10.1111/nhs.12048 [Accessed: 09/03/22]

VAISMORADI, M., TURUNEN, H. and BONDAS, T., 2013. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing and Health Sciences* [online]. 15 (3), pp 398-405. Available from: https://onlinelibrary.wiley.com/doi/full/10.1111/nhs.12048 [Accessed: 11/03/22]

VARES, E A., SALUM, G A., SPANEMBERG, L., CALDIERARO, M A. and FLECK, M P., 2015. Depression Dimensions: Integrating Clinical Signs and Symptoms from the Perspectives of Clinicians and Patients. *PLoS ONE* [online]. 10 (8), pp 1-15. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4552383/pdf/pone.0136037.pdf [Accessed: 16/04/22]

VOLKIN, S., 2020. *Social media fuels spread of COVID-19 information and misinformation* [online]. Available from: https://hub.jhu.edu/2020/03/27/mark-dredze-social-media-misinformation/ [Accessed: 09/03/22]

WARRENDER, D., MILNE, R, 2020. How use of social media and social comparison affect mental health. *Nursing Times* [online]. 116 (3), pp 56-59. Available from: https://www.nursingtimes.net/news/mental-health/how-use-of-social-media-and-social-comparison-affect-mental-health-24-02-2020/ [Accessed: 27/01/22]

WILLIAMS, A., FOSSEY, E., FARHALL, J., FOLEY, F. and THOMAS, N., 2018. Recovery After Psychosis: Qualitative Study of Service Users Experiences of Lived Experience Videos on a Recovery-Oriented Website. *JMIR Mental Health* [online]. 5 (2), PP 1-13. Available from: https://mental.jmir.org/2018/2/e37/ [Accessed: 17/04/22]

WILLINGER, U., HERGOVICH, A., SCHMOEGER, M., DECKERT, M., STOETTNER, S., BUNDA, I., WITTING, A., SEIDLER, M., MOSER, R., KACENA, S., JAECKLE, D., LOADER, B., MUELLER, C. and AUFF, E., 2017. Cognitive and emotional demands of black humour processing: the role of intelligence, aggressiveness and mood. *Cognitive Processing*

[online]. 18 (2), pp 159-167. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5383683/ [Accessed: 05/04/22]

WORLD HEALTH ORGANISATION, 2021. *Depression* [online]. Available from: https://www.who.int/news-room/fact-sheets/detail/depression [Accessed: 27/01/22]

YIP, C., HAN, N R. and SNG, B L., 2016. Legal and ethical issues in research. *Indian Journal of Anaesthesia* [online]. 60 (9), pp 684-688. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5037952/ [Accessed: 25/03/22]

ZHOU, J., LIU, L., XUE, P., YANG, X. and TANG, X., 2020. Mental Health Response to the COVID-19 Outbreak in China. *American Journal of Psychiatry* [online]. 177 (7), pp 1-2. Available from: https://ajp.psychiatryonline.org/doi/epdf/10.1176/appi.ajp.2020.20030304 [Accessed: 27/01/22]

ZINKO, R., STOLK, P., FURNER, Z. and ALMOND, B., 2020. A picture is worth a thousand words: how image influence information quality and information load in online reviews. *Electronic Markets* [online]. 30, pp 775-789. Available from: https://link.springer.com/content/pdf/10.1007/s12525-019-00345-y.pdf [Accessed: 09/03/22]

ZYL, L E., ZONDERVAN-ZWIJNENBURG, M A J., DICKENS, L R. and HULSHOF, I L., 2020. Exploring meaning in life through a brief photo-ethnographic intervention using Instagram: a Bayesian growth modelling approach. *International Review of Psychiatry* [online]. 32 (7-8), pp 723-745. Available from: https://www.tandfonline.com/doi/epub/10.1080/09540261.2020.1809357?needAccess=true [Accessed: 02/02/22]