

Can social networking apps like Instagram and Tik Tok
be responsible for causing a drastic vicissitude in the emotional health
of users during the isolation period of a global pandemic?

By

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{In the name of Allah, the most Merciful and Beneficent First and Foremost praise is to ALLAH, the Almighty, the greatest of all, on whom ultimately, we depend for sustenance and guidance. I would like to thank Almighty Allah for giving me opportunity, determination and strength to do my research. His continuous grace and mercy were with me throughout my life and ever more during the tenure of my research. My Supervisor, Family and My Close friends}

Declaration of Authorship

I, Dina Aziz, declare that this thesis titled, “Can social networking apps like Instagram and Tik Tok be responsible for causing a drastic vicissitude in the emotional health of users during the isolation period of a global pandemic?” and the work presented in it are my own.

I confirm that:

- Where I have consulted the published work of others, this is always clearly attributed.
- Where I have quoted from the work of others, the source is always given.
- With the exception of such quotations, this thesis is entirely my own work.
- I have acknowledged all main sources of help.

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Abstract

When using social media, users run the danger of exacerbating their mental health. Over the last decade, software developers have failed to emphasise the necessity of taking responsibility in safeguarding users, resulting in an increase in mental health concerns within the community. This study was designed to address how certain social networking applications like Instagram and Tik Tok can be proven responsible for causing a significant difference in the emotional health of users during a global pandemic. To accomplish this, existing literature was reviewed to exemplify the impacts of social media by employing theories to characterise consumer and user behaviours. Numerical data from 7129 people aged 17 to 40 was also obtained, through questionnaires and interviews to examine how daily sedentary activities affect regular users of social media and to interpret the relationship between social media and mental health. Specific formular and analysis were chosen to investigate the outcomes of the primary research, the findings of the data showed a negative correlation between the use of social media and mental health thus proving the hypothesis of “there will be a negative response from users regarding social media the questionnaire”. From the data collected it was perspicuous that users desired an application to maintain control and benefit from learning about how dopamine levels are affected from using social media applications. Which led to the development of a journaling app in order to assist users in keeping track of their mental state as a solution and to alleviate and mitigate the issue of the detrimental effects on mental health caused by browsing social networking websites during an isolation time. The application was designed from low fidelity to high fidelity ready for final implementation. The findings will be utilised as an ethical guideline for developers in the future to understand how the design of social media programmes can be adjusted to support users' emotional health.

Author Key words: Social media, Mental Health Issues, Global Pandemic, Isolation, COVID-19.

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Chapter 1

Introduction

In the modern age of communication, social media has been one of the most revolutionary transitions to enhance human connection. Social networking has empowered conventional interaction with greater agility and distance, all without requiring a huge amount of effort when doing so. Becoming a tool conquering the need for formality and importance that would traditionally be required social media poses many overlooked implications. Recently, a new virus known as the Coronavirus (COVID 19) caused a massive epidemic. The WHO Emergency Committee declared a worldwide health emergency on January 30, 2020, based on rising COVID 19 case notification rates in Chinese and international locales (Velavan, T.P. and Meyer, C.G., 2020). Coronaviruses are enclosed, positive single stranded big RNA viruses that infect humans as well as a variety of other animals (Velavan, T.P. and Meyer, C.G., 2020). In 1966, Tyrell and Bynoe were the first to grow the virus on their patients and found that it resembled the common cold (Tyrell, D.A.J. and Bynoe, M.L., 1966.). The virus's widespread spread led to a global pandemic, resulting in a vast majority of the world's population being ordered to stay indoors until the situation was under control. Many people were forced to stay indoors for days, months, and ultimately an entire year. Citizens' capacity to communicate with others was limited due to isolation limitations enforced by government agencies, thus many turned to social media to stay in touch with family, friends, and loved ones. This paper aims to uncover the consequences of using social media during the isolation period of a global pandemic.

Due to the current pandemic, social media platforms have been ubiquitous and easily accessible, increasing the chance of potential mental health consequences. Governmental lockdown limitations have provided the opportunity for the excessive use of social media to thrive, especially given that all other essential communication requirements have been entirely curtailed and prohibited. Research has shown that the excessive use of social media has led to a rising issue of anxiety and depression. In a society where users encounter barriers to what is considered normal communication, health experts and social media developers must be able to dive deeper into the causes to be better equipped in preventing the destructive consequences of social networking. Undertaking research could help gain a deeper understanding of how and why users experience such consequences and what we could learn from it.

1.3 Aim and motivation

Mental health awareness has grown expeditiously in recent years, and it has been implemented in nearly every system except social media. Currently, there is no method to truly track and quantify the psychological effects of technology. The major objective of this research is to collect data concerning both positive and negative thoughts with regards to social media through a series of planned experiments containing both measurable and qualitative data. This will aid in gaining a better understanding of the side effects of apps that users use on a daily basis. The purpose of this study is to demonstrate the negative and positive impacts that algorithms on apps like Instagram and Tik Tok may have on its users, with the aim that the findings will lead to a greater recognition of ethics and morality input in applications while building such platforms. This study will be paramount in understanding how social media can create prominent psychological issues and further illuminating the connection between emotional health and social media technology. This article will also provide ways to aid in the reduction and prevention of social media addiction. This will be achieved through the ethical principles described above when developing such applications and by advocating appropriate aid to people in need through creating an app with the distinctive task of assessing mood changes and anxiety levels in users.

The inspiration for this research stemmed from personal experience in using social media. The current generation was the first in history that started using social media at a vulnerable age and now it is the first generation to experience pure isolation whilst relying on and only having access to these applications that were intended for short term use. Users on Instagram alone contribute 100 million new posts every day which emphasizes the immediate need to prioritize research into social networking websites for health screening (Reece, and Danforth, 2017).

1.4 Research questions and contributions

The overall research question is to explore if social media applications like Instagram and Tik Tok cause a drastic vicissitude in the emotional well-being of users, this question will be explored through the following objectives:

- Determine if Instagram and Tik Tok are responsible in causing a negative change in the mental health of users
- Understand of the consequences and benefits of social media from both a literature stance as well as user point of view
- Understand what users utilise social media for during a pandemic
- Understand the what unpleasant thoughts/anxiety-like behaviour is triggered through the use of Instagram and Tik Tok
- Develop viable strategies and solutions with users for the negative consequence faced

1.5 Overview of the report

The report will begin the journey with an extensive literature review. The research demonstrated here will leverage current ideas, studies, and definitions to offer support for the validity of the research questions enlisted above. This will be closely followed by Chapter 3 where thorough primary research will be assembled in order to assist assessment of the ideas developed in the second chapter, providing further proof in the reasons for exploring the research topics. Chapter 4 will encompass the findings found in the experimental studies conducted in Chapter 3. With the findings from the previous chapter, Chapter 5 of the report will concentrate on establishing a viable remedy for the difficulties encountered in the technique and current literature through the use of technology. Chapter 6 of the paper will encompass the testing of the suggested solution and revise the software contributions/tools that were utilised to provide the soluble solution. The project will then be swiftly concluded on the objectives of the research project and a discussion of potential future work.

Chapter 2 – A review of the literature including secondary research to better understand social media and its consequences.

Chapter 3 – Primary research utilising questionnaires and interviews to assess the role of Instagram and Tik Tok on the user's mental health and to comprehend the effects of using such applications.

Chapter 4 – Findings of the primary research conducted in Chapter 3 using thematic and statistical analysis

Chapter 5– Creating a viable solution to the challenges and implications identified in the core study results found in Chapter 4

Chapter 6 – Evaluating the solution's testing and analysis

Chapter 7 – Discussing the study's results and concluding the research's findings. As well as an appraisal of final product and potential future iterations/projects

Chapter 2

Literature Review

This chapter will provide a critical review of existing literature and research surrounding the definition of social media, an introduction to Instagram and Tik Tok and the current impacts of socially networking online. I will begin by defining the term social media followed by a description of the specific social media applications that I will be assessing my research question around, I will then outline the relevant theories, to provide an overview of the current development of said applications and challenging the impacts that social media has on society.

“In a few years, men will be able to communicate more effectively through a machine than face to face.” (Licklider and Taylor, 1968). Originating from a calculating machine, the means of communication was reborn through the dramatic invention of the computer (Abbate, J., 2000). The single experimental network, now famously known as ‘the internet,’ opened the floodgates to instantaneous long-distance communication. Which we now use extensively every day, from exchanging multimedia to text messages and emails. Although social media and the internet feels like a recent phenomenon, it constitutes years of communication development. An item of the internet that we use every day are search engines, an eminent example that is most acquainted by our current generation is Google. From Lego servers in 1995 Google has established products that are now used by billions of users worldwide such as YouTube and Gmail (Google). Emails were the more traditional concept of social media, nevertheless this term has radically translated into a collective mechanism that we as humans could never have imagined. Google built an incredibly useful service but a parallel advertising and monetizing machine, where if you are not paying for the product, you are the product.

2.1 What is Social-Media?

Human beings have the fundamental need to belong and connect, for which interpersonal communication is the key to fulfilling these needs (Yubo Hou 2019). The term ‘social media’ derives from a medium that enables people to interact with others through the significance of sharing multimedia content, both verbally and visibly whilst removing the barrier of time constraints that were intrinsic with conventional methods of communication. These qualities help differentiate platforms from other media outlets such as, newspapers and tabloids. In the recent century, the drastic change of interpersonal communication has been rapidly evolved through the proliferation of Internet-based social media. Today's social media websites are focused on gaining recognition through their enormous user database, which aids in encouraging success through the sharing of material and views. This success is celebrated not just by the platforms that host it, but also by the users who become influential figures as a result of the followers and tractions that they gain on it.

Over the past decade, the use of social media has grown exceptionally. As of 2021 it has been dated that around 58% of the world’s population use social media, reaching global backgrounds of 3.96 billion people, this statistic suggests that the growth will only continue to rise (Dean, B., 2021). Roughly one billion people from this figure use social media applications called Instagram and Tik Tok. The simplicity of social media is what attracts users, the interfaces concede even non-specialists to share and communicate media. This proves the idea that online tools can be used to facilitate the one-to-many sharing of multimedia content (Fotis, J.N., 2015). The freedom to share thoughts is what makes internet-based websites and applications revolutionary; users can share material with individuals they already know as well as create relationships with strangers who may share similar views; it is the content that is important rather than the platform itself. The content that users share online can be divided into several broad categories such as, searching for content, e-commerce, advertising, contribution, sharing, participating, consuming, and playing games. Krylova suggests that the interaction element of social media is shared more between the ages of 18 to 34, where they may utilise it for interaction reasons more than the older age groups, implying that younger individuals prefer to share and gain knowledge (Krylova, D., 2017).

Social media has provided access to a plethora of advantages. One of the more critical advantages that social media has brought forward is connecting people to bring about political change. A current example is the Black Lives Matters Movement. On the 25th of May 2020, a video had been recorded by a civilian which presented a 46-year-old Black man called George Floyd being detained and held down by Minneapolis police with the suspicion that Mr Floyd was using a counterfeit bill to pay at the convenience store (Hill, E., 2021). Within 17

minutes of the arrest, the officers pinned down Mr Floyd and began kneeling on his neck which left the unconscious man pleading for his last breath. The devastating video reached the ends of social media, from Twitter to Instagram and Tik Tok. The video became inextricably viral, and many users felt distressed that nothing was done with regards in justice for George Floyd. As a result of the video's popularity, the officer who was kneeling on Floyd's neck was charged with third-degree murder and second-degree manslaughter. This result was not just obtained through sharing and tweeting about the video, users took it upon themselves to organise protests around the world, from the UK to the USA and 60 additional countries, this staggering outcome cannot be celebrated without the aid of social media (Weine, S., 2020). Many important figures in the entertainment industry also stepped forward in solidarity to join the movement against police brutality and support black lives. The world came together to not only end race incited violence and institutional racism but to also to demand reform in the socioeconomic and political institutions that subject people of colour to the same negative oppression that is derived from white privilege and power (Weine, S., 2020). George Floyd was only a preview of the impact that social media has had on global change and presents endless opportunities for reckoning various injustices.

2.1.1 Instagram

Delving deeper into the applications that have redefined “social media”, Instagram has proven to be one of the most successful applications to host a platform where users can connect and interact. The premise of Instagram is simple, the user signs up online to create a profile where they can connect with people to join a community of users on the internet. The user is then presented with the option of following other users and hashtags that they are interested in. Through establishing their preferences, users can then build connections with their friends, family, and perhaps new online mutual acquaintances. Concluding the final step where users can finally post content on the application through the set of interactive tools such as, ‘Stories’, ‘Filters’, ‘Reels’, ‘IGTV’, ‘Explore page’ and so much more (Instagram).

When Instagram first launched in 2010, it had extremely rudimentary capabilities that limited users to uploading one image at a time. However, throughout the years, Instagram has built considerably more advanced features for people to share and receive multimedia through (Moreau, E., 2018). Deriving familiar features from Facebook, Instagram was able to uniquely compose interactive tools such as, “stories” and “reels” to keep their users engaged through visual sharing. Despite being greatly influenced by rival social media applications such as Snapchat (for stories) and Tik Tok (for reels), Instagram managed to remain omnipresent in the business and continue to grow if not flourish. The application's primary function is for users to keep their followers up to date on their lifestyle by uploading pictures and videos.

While humanity is prospering in the era of technology, there has been a significant movement toward creating an online presence. Instagram, which was once merely a platform for people to upload collected pictures, has now evolved into a form of currency and a source of employment for many content creators. The present epidemic has become host to a diverse range of users who not only use Instagram as a pass time but rather, an opportunity centred platform where they can find anything from business start-up tools to creator funding, donation services, e-commerce possibilities, and much more. Due to the impede of face-to-face interactions, many people have struggled to work around the endless months of travel restrictions and bans, resulting in a large number of users turning to social media during the isolation period of a global pandemic to stay in touch with family, friends, and online followers. Instagram has become one of the most effective tools for sustaining day-to-day human connection and for hosting and promoting regular communication that would otherwise be outlawed.

2.1.2 Tik Tok

Tik Tok has been the most recognised application to grow expeditiously in being an emerging and current application while also remaining relevant in an age where social media is always evolving and fighting for our attention. Hosting an emerging short video social media platform, Tik Tok enables users to create content with a variety of filters and sounds to share with an enormous online community of viewers. Tik Tok was discovered by ByteDance, a Beijing-based startup, and first gained popularity in 2019 at the onset of the worldwide pandemic (Omar, B. and Dequan, W., 2020). By April 2020, the app had surpassed over 2 billion downloads and became quickly known for its featured 15 to 60-second videos. The phrase “short video” refers to any multimedia content that is less than 5 minutes long. Tik Tok rapidly began to grow not only in China but across the West. Considering that this is a relatively new application, there is a general consensus on the tools that this app provides in comparison to other apps. In comparison to Instagram, Tik Tok's major attraction is that the app

captures its audience through short videos on an endless scroll, whereas Instagram is traditionally recognised for a mix of multimedia posts that are determined by the users following. For an application to be revolutionary, it must provide some sort of novel functionality that has yet to be discovered, which Tik Tok accomplishes through their prodigious frequency of videos and simplicity of use. Tik Tok focuses on fast-changing public discourse through today's societal trends and agendas in themes ranging from the entertainment sector to life hacks and even potential businesses. The product is summarised by the gradual slight imperceptible shift in the user's behaviour and perspective. Although Tik Tok quickly gained popularity, it was not the first platform to introduce short videos; prior to Tik Tok's sustained success, other applications used a similar framework, such as 'Keek,' 'Vine,' and 'Musical.ly,' all of which had a significant impact on social media culture, primarily through the concept of sharing funny videos and 'memes.' The development of such platforms jeopardised the relevance of older social media websites. The legacy of short videos pressured other apps such as Instagram and Facebook to introduce "story" functions, "reels" and "IGTV" to keep their users enticed. In 2018, Musical.ly rebranded to Tik Tok, this strategic rebranding was calculated by ByteDance. Primarily Musical.ly was known famously for its lip-syncing short video platform which was a great hit with users but faced defeat when the app could not gain enough traction through engagements (Kaye, D.B.V., Chen, X. and Zeng, J., 2021).

Attention is defined as being aware and focused (McCallum 2015). Users prefer short films since present and future generations have proved to have a shorter attention span than Millennials who grew up with content that were longer than 5 minutes and occasionally exceeding 20 minutes in length (Lelliott, S., 2016). Users have also shown a preference for shorter videos with low production costs as they are easier to spread than longer videos with a higher production cost. Recent statistics show that people watch around 16 hours of online videos per week, and while this is a significant amount of time, the content is most likely to be "short videos" (King, D.L., 2018.). Tik Tok employed the platformization conceptual framework in their user-generated content (UGC), which functioned as an international substitute and parallel to China's Douyin application. Tik Tok's backbone is user created content, which promotes a self-sustaining social media eco system that fuels the viral video phenomena. Many users noticed that Tik Tok promotes a simpler and more accessible app with a transparent algorithm that favours people based on their content rather than their status or follower count. According to Brouwer, statistics show 64% of customers make a purchase after viewing branded social videos. Tik Tok uses their vast collection of information to build exponential algorithms and customised marketing (Brouwer, B., 2017.). (Brouwer, B., 2017.).

2.2 Impacts of Social Media and theories

This research project seeks to investigate the influence of social media on users' mental well-being and consumer behaviour as perceived through two of the most popular social networking apps, Instagram and Tik Tok. Through the depiction of theories and studies, this section of the evaluation will apply a complete knowledge of how the success of these apps has influenced consumers.

2.2.1 The Negative Impacts

Every day, young people and teenagers fall prey to the influence and addiction of social media. Excessive use of social media has been linked to a distinct kind of behavioural addiction, with symptoms often associated with substance use disorders (Zendle, D. and Bowden-Jones, H., 2019). "There are only two industries that call their customers 'users': illegal drugs and software" (Edward Tufte). The features and continual activity of Instagram and Tik Tok can be burdensome, according to Berson and Berson, the numerous sensory inputs are taxing on cognitive resources and might overload children's capacity to participate in meaningful decision making (Berson and Berson, 2005). Given that decision making is a fundamental ability in human behaviour, compromising this component may result in long-term health issues. Furthermore, balancing concurrent and excessive activities can frequently result in the psychological condition of anxiety as proved by a 2017 study showing that anxiety is the direct result of overwhelming activity (Shensa, A., 2017). Anxiety and depression are some of the most prevalent disorders found in both children and adolescents. A 70% surge has been found in the younger generation which further highlights the priority in understanding the influence of social networking and finding immediate solutions (Keles, B., 2020).

There is a cacophony of grievances and scandals that need to be addressed when using social media. A systematic review published in 2017 revealed a substantial association between the usage of social media and depressive symptoms in both children and adolescents (McCrae, N., Gettings, S. and Pursell, E., 2017.). Similarly, another study discovered mirrored results using the statistical approach of a meta-analysis, demonstrating a striking link between problematic Facebook use and psychological discomfort in teenagers and

young adults (Marino, C., Gini, G., Vieno, A. and Spada, M.M., 2018.). As discussed previously, Instagram encourages users to create content by utilising the various tools that the app has to offer. One of the most celebrated functions includes the filters. Filters enable users to apply pre-set modifications to photos and videos before uploading them to the internet. These alterations can range from beauty filters to humorous and gaming filters. Although the filters encourage innocent foresight, the pervasive characteristics play a significant role in the loss of self-esteem, lifestyle fabrication, and general negative social comparison. An earlier study by Seabrook discovered an evidential link between social comparisons and high levels of sadness and anxiety within participants (Seabrook, E.M., Kern, M.L. and Rickard, N.S., 2016). Similarly, Appel, Gerlach, and Crusis found that passively browsing Facebook can predict social comparison and envy, which is a potent emotion in both depression and anxiety (Appel, H., Gerlach, A.L. and Crusius, J., 2016).

2.2.2 The Positive Impacts

It is easy to lose sight of the reality that these techniques have resulted in beneficial outcomes, such as meaningful systemic changes throughout the world and encouraging progressive leadership. According to an American Academy of Paediatrics report, social media has been shown to improve bonds through friendship and relationships formed online, as well as reduce loneliness, implying a positive reinforcement in mental health, which is crucially significant, especially during a pandemic where loneliness is inevitable (O'Keeffe, G.S., and Clarke-Pearson, K., 2011). "Adults who are more socially connected are healthier and live longer than their more isolated peers" (Umberson, D. and Karas Montez, J., 2010).

Although social media has influenced how society functions and encourages users to engage in political discourse, networking online has grown in popularity due to economic significance by providing an alternative to traditional marketing through the competitive currency of influencing. Companies like Instagram and Tik Tok have profited off the new generation's reliance on brand loyalty and marketing for their frequent e-commerce habits. An empirical examination of Paniagua and Sapena's approach revealed that 'following' and 'likes' can have a positive impact on a firm's share value, which further provides the evidence of such financial benefits (Paniagua, J. and Sapena, J., 2014). While traditional marketing is being replaced by social media, according to Bolter and Grusin (1999) traditional forms of media is continuously undergoing appropriation and reconstruction by the new and current media which is collectively the process of "remediation" (Bolter, J.D. and Grusin, R., 1999). The instantaneous platform is what attracts users to social networking sites, providing an increased speed of information transfer companies maintain user engagement when marketing products and services. It is noted that 83% of 18-29-year-olds promulgate their information through social networking websites (Knight-McCord, J., 2016). Engaging on these platforms, particularly during a pandemic, is a vital activity for users to maintain regular contact and connections as a sort of normalcy during such an unpredictable period. These platforms have given endless possibilities for users to pursue a career through content production and in doing so, supporting the business start-up culture. Almost every social media action is tracked, and this data can be used to deduce user personality types. Business models are developed based on this data, to encourage a more precise prediction of user behaviours for socio-cultural phenomena such as Instagram and Tik Tok. This is done to produce targeted advertising and enhance ad revenue. The goals of engagement, growth, and advertising is what really keeps social media going, and each of these goals is fuelled by algorithms that lure users in.

2.2.3 Displacement Behaviour Theory and Sedentary behaviour

Displaced behaviour theory, specifically exemplified by sedentary behaviour, is an essential theory to consider when addressing behaviours encouraged by the use of social media. Sedentary behaviours defined by PATE, O'NEILL, and LOBELO (2008), are activities involving energy expenditure with slightly above resting metabolic rate (1.0-1/5 MET, one MET is defined in term of oxygen uptake; 3.5 mL/kg/1min). Activities include sleeping, lying down, watching a screen, and so on (Pate, R.R., O'Neill, J.). According to Nielson Media research (2000), individuals spend an average of 28 hours per week watching television, implying that these sedentary behaviours are quite common (Nielson Media Research, 2000). Discernibly, users have shifted their attention from watching television to portable screens such as mobile phones, promoting sedentary behaviour via users using their devices to stay connected during low energy tasks.

Many studies have linked this behaviour to physical health concerns such as type II diabetes (Hu et al 2003), excessive blood pressure (Jakes et al 2003), and cardiovascular disease (Kronenberg et al 2000). Sanchez-Villegas et al. (2008) proposed that decreasing sedentary behaviour is an essential intervention in the treatment and prevention of depression and anxiety disorders (Sanchez-Villegas, 2008). Sanchez also stated that

participants in his longitudinal study who exhibited high levels of sedentary behaviour had a 31% chance of acquiring a mental disorder such as depression, bipolar disorder, anxiety, or stress. According to the Displaced Behaviour Theory, “evidence shows that low doses of physical exercise may be protective against depression.” (M. Teychenne, K. Ball, and J. Salmon 2008). Sugiyama et al. (2007) replicated similar findings where, participants emphasised the negative correlation with the influence of sedentary behaviour on physical activity resulting in health risks (Sugiyama, T., 2007).

The inverse relationship between high sedentary behaviours and displacement physical activity is supported by the findings of several studies, indicating that more focus should be put on the prevention of such behaviour to treat depressed and anxiety-related symptoms rather than encouraging it. Thirlaway and Benton (1962) contributed to the validation of this concept by performing a research that discovered depression can be reduced in patients who engage in at least one hour of physical exercise each week (Thirlaway, K. & Benton, D., 1992). Ono et al. (2011) supports this by stating that face-to-face social engagement can boost mental health (Ono, E., 2011).

Overall, the research gathered in this literature review has proven to be critical in determining the research objective of understanding the consequences and benefits of social media. It has also been an essential part of determining the role that social media plays in our daily lives and further highlighting the immediate change that is required in order to implement a healthy emotional well-being. Due to insignificant reports made on the relationship between mental health and social media usage during a global pandemic, the next stage of the research project will be to collect primary research. The research will also be collected to support the evidence identified in this review and govern possible conclusions with the goal of producing a feasible strategy/solution based on the findings.

Chapter 3

Research Methodology

After conducting extensive research into the consequences of social media, it was revealed that there has been an insignificant attempt made in providing a remedy to the harmful effects. There has also been minimal statistical evidence in proving that mental health disorders can be caused as a direct result of frequently using social media. There is potential for disputing this by producing an unique investigation and solution using primary research. It is essential to attempt in solving the worldwide epidemic of social media addiction and the importance of capturing the user's natural emotions and behaviour towards using social media. Anecdotal evidence will be gathered through the performance of numerous surveys and tests in hopes to investigate the true impacts of social media. Fundamental to any software project involves a method and design process. In this section, the specification aspect will be outlined, which will thoroughly entail the steps that will be taken before the design and implementation part of the report.

3.1 Participant Research via Questionnaires

3.1.1 Initial Questionnaire Brief

It is critical for this article to utilise a research instrument to test the study questions and collect data from respondents to establish the validity of both good and negative experiences that users have when using social media. The initial intention is to demonstrate that many people have adverse rather than positive experiences on apps like Instagram and Tik Tok. These applications are mostly recognised for frequently engaging consumers through contemporary content; nevertheless, the hidden negative side effects are beginning to emerge, and this experimental study attempts to uncover the actual consequences of social media on its users.

The purpose of this study will be to collect anecdotal data using a questionnaire. The primary goal of the questionnaire study is to discover how much time users spend on social media apps, especially Instagram and Tik Tok, and how users presently measure their time when using these apps. To address this, a hypothesis was developed that investigates "there will be a substantial difference between individuals who adversely link the applications Instagram and Tik Tok with their emotions vs those who do not.". Due to existing government constraints and limitations, it has been determined that the questionnaire will be published online, and as result opportunity sampling will be used to recruit participants. The medium that will be used to distribute the questions is Instagram, specifically Instagram stories. This stories feature promotes a convenient way of gathering results in a short period time while still enabling users to submit their opinions and answers in a detailed format. A staggering total of 4564 participants aged from 17-40 were gathered to take part in the questionnaire.

3.1.2 Methodology

Invented by Sir Francis Galton in the late 1800, questionnaires provide a standardized selection of quantitative data that can be statistically analysed to provide evidence for theories/hypothesis. (Roopa, S. and Rani, M.S., 2012). Questionnaires are made up of a series of open and closed questions which many novice researchers use to gather data from respondents (Rowley, J., 2014). Not only can questionnaires collect quantitative data but depending on the type of question styles selected, qualitative data can also be attained. This study will focus on collecting both measures of quantitative and qualitative data through 16 general questions. One of the many benefits of administering a questionnaire is that it significantly lowers the time required to collect data. This method of data collection is also free, ensuring accessibility and availability for both the participant and the researcher while eliminating any financial constraints.

The respondents of this study were gathered through opportunity sampling. Opportunity sampling is a type of non-probability or non-random sampling that is obtained when the target population for a research study meets the practical and convenient criterion (Etikan, I., Musa, S.A. and Alkassim, R.S., 2016). This sampling technique has been adopted because it proved to be the most practical method for obtaining participants, especially during a period where meeting respondents may be prohibited. Although this may appear to be a negative, a far greater number of participants were able to participate internationally using this approach than

there would have been if face-to-face or over the mail was used. This also helped to decrease bias in opportunity sampling as participants were not restricted to participated from one location. Other sampling styles often include an incentive for participants to join for example, in the Milgram 1963 study the researcher had inserted an advert in the local newspaper offering \$4 for respondents to join the study, this is an example of volunteer sampling (Milgram, S., 1963). Opportunity sampling also encourages the collection of ecological data in a cost-effective and easily accessible manner. To collect the data, a personal Instagram account was deployed, which proved to be quite efficient due to the account's large number of active and engaged followers.

3.1.2.1 Questionnaire Structure

The study will include the following questions in a numbered list from one to sixteen; “How old are you?”, “Are you male or female?”, “Where are you from?”, “Do you own a smartphone?”, “Do you use your phone every day?”, “What social media applications do you use?”, “Do you care about how social media applications affect your mood?”, “Have you ever used a mood tracking application before if yes what is it called”, “Name something you wish a mental health/mood tracking application could do”, “on a scale of 1 to 10 how important is it keeping a mood journal and writing down how you feel to you? 1 being released and 5 being most.” “Would you be interested in an application that has journaling qualities to help keep track of your mood?”, “Would you be willing to use the application every day to help?”, “How would you like to log your moods when using apps?”, “Would you be interested in a daily, weekly monthly and yearly analysis of your mood in relation to activities and app usage? If yes or no why”, “What kind of data would you want to receive when using social apps for your emotional health?” and “Are there any other apps apart from social media that you would like to track your mood for?”.

3.1.4 Second Questionnaire

As mentioned previously, due to a huge portion of participants responding to the first questionnaire there proved the desirability in conducting second questionnaire with further in-depth questions. The exact same methodology technique as the last questionnaire was applied in this study, with the only significant difference being the number of participants that were gathered this time around.

3.1.4.1 Second Questionnaire Structure

The following 11 questions were collaboratively assigned to enhance further developed answers from users; “Do you use tik tok or Instagram?”, “Do you feel like spending time online has helped you during lockdown?”, “How much time do you spend on Instagram/ Tik Tok during lockdown?”, “What app do you spend most of your time on?”, “What do you use to keep track of your spending time on Instagram or Tik Tok?”, “Do you think that it is healthy to spend the amount of time that you do on Instagram and Tik Tok?”, “Do you use Instagram or tik T.O.K to create content or just use it to like stuff and keep up to date with friends and family”, “How far would you agree with the following statement “social media negatively affects my mental health”?”, “What on Instagram or Tik Tok causes you anxiety or negative thoughts?”, “So you think fake news on Instagram slash Tik Tok has increased your anxiety?” And “How does Instagram or Tik Tok help with your mental health?”

Using the results from the previous study the hypothesis will be changed to a one directional design as the difference was favoured more on the negative side rather than the positive thus, the one directional hypothesis for this questionnaire will be, “there will be a negative response from users regarding social media the questionnaire”.

3.2 Interviews with Thematic Analysis

3.2.1 Brief

This moment of the project inherits a qualitative approach in exploring what users feel when using social media and uncovering the impacts that user's may have faced. This study aims to break down the following sub-questions and hypothesis; ‘There will be a greater number of users who will present a negative opinion about Instagram and Tik Tok than those who do not’, ‘Majority of users will show traits of their emotional health being impacted by the use of Instagram and Tik Tok’, ‘Many users will have a positive reaction to downloading an app that can aid in the tracking of their mood and digital activities’. Each of these hypotheses are directional as

the results from the previous questionnaire provided insight into how users feel thus, encouraging the conviction of a directional finding. The interviews will be carried out in a semi-structured setting, where the user will be asked open-ended questions through the medium of video calls, voice notes, and direct messages. The interviews aim to justify the method, personal accounts of detailed experiences of users regarding their use of social media. The structure for the interview presents the opportunity of exploring the participant's thoughts and develop on any new topics that they may bring up. A total of 20 participants were gathered, all aged between 15-28 (see appendix E). Due to the current pandemic, it proved to be difficult to conduct a more structured deductive with standardized controls, hence why the decision for a semi-structured interview proved to be a more viable option.

3.2.2 Methodology

The method of this research for this study involved using semi-structured interviews to collect qualitative data that could be later analysed through predetermined themes and codes. A semi-structured interview focuses on collecting a verbal interchange between the interviewee and the subject where elicited data is gathered through the process of informal predetermined questions. The decision of selecting semi-structured interviews for the data set was in reflection of the accessibility and convenience that was presented as well as the interviews offering the opportunity for an unrestricted conversational manner to occur for a better chance of exploring issues that were not already conspicuous. Longhurst reports semi-structured interviews as one of the most used qualitative methods to use when conducting interviews (Longhurst, R., 2003). An example of a successful study that used semi-structured interview was by Tom Brockwell (2013). The used an inductive thematic analysis of the experiences of 10 adults with Autism Spectrum Conditions (ASC) as they transitioned to employment settings in the UK (Brockwell, T., 2013).

Participants for this study were gathered through online platforms and social media through opportunity sampling. This type of sampling was chosen as it would be superlative to use the whole population and, in this case, due to the isolation period it was very difficult to be selective with participants to conduct interviews with as some may not have access to a device that would allow them to participate in the interview. Thus, in promoting such easy accessibility and availability, the interviews were carried out through a mixture of voice notes, direct messages, and video calls to better suit the interviewees.

Thematic analysis allows for the examination of enormous amounts of data from multiple participants into a comprehensible narrative whilst sorting them into relevant and broad themes (Boyatzis, R.E., 1998). Introduced by Gerard Houlton in 1973, thematic analysis offers an application of different theoretical frameworks through essential paradigms. This methodology is often used as a convenient approach when exploring qualitative data related to user's opinions, experiences, views, and knowledge. Data gathering is crucial to every research study, thus the decision of how the data is obtained remains imperative as the results should contribute to providing a greater understanding of the theoretical framework. The analytical techniques selected for a semi-structured interview are dependent on the questions and hypothesis of the methodological approach. As mentioned previously, this study aims to break down the following sub-questions and hypothesis; 'There will be a greater number of users who will present a negative opinion about Instagram and Tik Tok than those who do not', 'Majority of users will show traits of their emotional health being impacted by the use of Instagram and Tik Tok', 'Many users will have a positive reaction to downloading an app that can aid in the tracking of their mood and digital activities'. There are two approaches to consider when involving thematic analysis, inductive and deductive, both revolve around the collection of themes. An inductive approach depends on the data determining the themes whereas, the deductive approach relies on predetermined themes and codes that are expected to be reflected in the data based on existing knowledge (Braun, V. and Clarke, V., 2012). During the process of interviews, the inductive theoretical framework proved to be most suitable approach to develop a strong conception based on the qualitative data gathered. Within the data there also runs a distinction between a semantic and latent approach, the semantic approach caters to analyse explicit content that may be presented in the data, the latent approach includes the process of reading into the subtext and assumptions underlying data (Wandmacher, T., 2005). For this report, a semantic approach proved to be the most fitting as the hypothesis revolved around the participant's stated opinions than their assumptions and social context. Due to the sensitivity of the data in the study, ethical considerations needed to be considered. This was performed by keeping the participant's details anonymous and participants were debriefed at the beginning of each interview about where the data will be used, what for and if they consent to their opinions being presented. Each participant acknowledged this and agreed.

Chapter 4

Findings of Primary research

This chapter will encompass a discussion of the findings retrieved from the questionnaires and interviews conducted in Chapter 3 as well as outlining the objective and motivations for the future work that that is based on the findings of the research.

4.1 Initial Questionnaire Findings

Although it is natural to expect the results of this questionnaire to favour a neutralised user experience, the study obtained a relatively negative correlation from regular Instagram and Tik Tok users. When conducting the questionnaire, it is important to note that there was a 24-hour restriction for users to fill in their data, users only had 24 hours to view the Instagram story and fill in their answers. This restriction had no effect on the comprehensive replies provided by users as, many users were open to convey their interpretation of social media even without the probes. The questionnaire was conducted on the 16th of November 2020 employing 16 general questions. It was assumed that the responses from the questionnaire would not be as large as anticipated however, over 3,000 participants responded to help develop an application that would help them in their experiences of social media. The significant difference hypothesis of “individuals who adversely link the applications Instagram and Tik Tok with their emotions vs those who do not” was met through users sharing the negative experiences that they had when using social media. To analyse the findings of the questionnaire descriptive statistics, preliminary analysis, and thematic analysis was used.

4.1.1 Descriptive statistical analysis of Initial Questionnaire

The first few questions were generic, focusing on the age range, location, and gender of participants; 78% of the participants (ppts) were between the ages of 18 and 25, which determined that the user persona and target audience for the app should be within this range (Table 1, see appendix A). 15% of the users were under the age of 17, suggesting a potential target demographic and indicating that the app should be suitable for anybody above the age of 4 (Table 1, see appendix A). 82% of the users were located in the UK and London suggesting a potential sampling bias however, many participants also listed that they were from other locations such as the US and Canada (17%) thus, reducing the initial bias. Users were then asked if they own a smartphone and whether they use it on a regular basis, an astounding 98% said that they do (Table 4, see appendix A). Although this is a predictable result it illustrates the heavy use of mobile devices used widely throughout the population particularly among those aged 18-25. This statistic further supports earlier literature which indicates the increase of adolescents contributing to sedentary behaviour (Sanchez-Villegas, 2008) and large percentage of users who vigorously use social media (Fotis, J.N., 2015). Sedentary behaviours (such as, watching TV/ completing activities that have resting MET rates) that did not include utilising social media were chosen as an extra confounding variable to control the accuracy in predicting the connection between the two primary variables.

1	Age	Results
A	Below 17	713 (16%)
B	18-25	3601 (82%)
C	26-35	220 (5%)
D	Over 40	30 (0.6%)

Table 1 showing figures for the ages of participants in initial questionnaire (see list of tables/appendix A)

2	Gender	Results
A	Male	713 (17%)
B	Female	3601(83%)

Table 2 showing figures for the genders of participants in initial questionnaire

3	Where are you from?	Results
A	London	1173 (42%)
B	USA	322 (1%)
C	Somewhere in the UK	1116 (40%)
D	Canada (175 ppts)	175 (0.6%)

Table 3 showing figures for the destinations of participants in initial questionnaire (see list of tables/appendix A)

4	Do you own a smart phone	Results 4306
A	No	94 (2%)
B	Yes	1745 (40%)
C	Yes, and I use most of my apps on my smart phone	2351 (55%)
D	Yes, but I use most of my apps on another device e.g., tablet/iPad.	116 (3%)

Table 4 showing figures of users who own a smart phone in initial questionnaire (see list of tables/appendix A)

5	Do you use your phone everyday	Results
A	Yes	2267 (98%)
B	No	39 (2%)

Table 5 showing figures of users who use their phone everyday in initial questionnaire

The next few questions were a mix of open-closed answers that focused on the use of social media. Users were probed on what apps they use and 85% of the participants reported using a collective of social media apps together (Instagram and others - Twitter, Whatsapp, Snapchat) (Table 6, see appendix A). Over 60% said they would like to find out more about how it affects their mood (Table 7, see appendix A). Participants were also queried on if they currently use any mood tracking apps and if so, what they are called, this concluded to a huge stream of over 100 respondents providing exemplary apps (Table 8, see appendix A). This statistic aided in understanding user expectations and needs, deriving the most popular mood tracking applications and why they use it.

To follow up, users were asked the open question of naming something they wish their current mood tracking app could do. This allowed responders to flood the answer box with various responses such as widgets, breathing exercises, recommended apps, motivational quotations, and reminders. Looking into the responses it was clear to see the features and functions that the high-fidelity app should undertake. An in-depth question was then asked on if ppts would be willing to use the app every day to help track their mood **and** 83% **said** they would, highlighting the user demand for such a product. In conducting the study there proved to be a motivation in providing a solution and build an app that would better suit the user, particularly concerning the mood applications that users currently used.

6	What social media apps do you use?	Results
A	No	94 (2%)
B	Yes	1745 (42%)
C	Yes and I use most of my apps on my smart phone	2351(56%)
D	Yes but I use most of my apps on another device e.g., tablet/ipage	116

Table 6 showing figures of what social media apps users use initial questionnaire (see list of tables/appendix A)

7	Do you care about how social media apps affect your mood?	Results (4571)
A	Yes	2452 (54%)
B	No	984 (21%)
C	Yes and I want to find out more about how it influences my mood	1135 (25%)

Table 7 showing figures of users who care about how social media apps affect their mood in initial questionnaire (see list of tables/appendix A)

8	Have you ever used a mood tracking app before?	Results
A	Yes	438 (15%)
B	No	2538 (85 %)

Table 8 showing figures of users who have previously used mood tracking apps in initial questionnaire (see list of tables/appendix A)

The final few questions focused on user feedback if such a mood tracking app were to be created. When asked what they thought of such an app, respondents flooded the suggestions box with features they would want to see included if the app was developed. Beginning with the closed questions, over 75% of users said they would be interested in an application that serves a purpose to track their mood, exemplifying the necessity for such an app in the market. Users must use the app on a regular basis for adequate data analysis for the software to operate properly; 84 percent of users stated that they would be glad to use the application every day to track their mood and develop that analysis. The analysis will be given to the user at different time intervals based on how long the user has used the app; 94% stated they would be interested in this information. This produced further confidence and desire in creating a meaningful application for users.

11	Would you be interested in an app that has journaling qualities to help track your mood?	Results
A	Yes	1062 (78%)
B	No	298 (22%)

Table 9 showing figures of users who would be interested in an app that has journaling qualities to help track mood in initial questionnaire (see list of tables/appendix A)

12	Would you be willing to use this app every day to help?	Results
A	Yes	1381 (84%)
B	No	270 (16%)

Table 10 showing figures of users who would be willing to use this app everyday to help in initial questionnaire (see list of tables/appendix A)

16	Would you be interested in a daily, weekly, monthly and yearly analysis of your mood in relation to activities and app usage?	Results
A	Yes	1129 (94%)
B	No	71 (6%)

Table 11 showing figures of users who would be interested in a daily, weekly, monthly, and yearly analysis of your mood in relation to activities and app usage for initial questionnaire (see list of tables/appendix A)

On a scale of 1 to 5, users were then asked to rate the importance of mood journaling. The table below (Table 12, see appendix A) displays descriptive statistics for all variables used in the Likert scale question. It is important to emphasise the independent, dependent, categorical, and continuous variables when conducting statistical analysis. The independent variable (IV) explores the controllable variable, in this instance mood journaling, and the dependent variable (DV) reflects the consequences of the independent variable; in this question, the relevance of maintaining a mood diary. As both primary variables have such a large range, they are both recognised as continuous variables. A group of 313 participants showed a mean of 3.26 (SD 2.14). Most users selected 3 and 4 on the scale, indicating the significance of mood journaling, while many others chose 5, indicating the importance of building an app that can assist users with mood journaling. Caldeira also advised that "Users seek to learn about their mood patterns and improve them, and to manage emotional distress and mental illnesses" (Caldeira, C., Chen, Y., Chan, L., Pham, V., Chen, Y. and Zheng, K., 2017).

	Question – continuous variable	Raw data	Mean, median, mode	Mean squared	Standard deviation
10	On a scale of 1-5 how important is keeping a mood journal and writing down how you feel to you? 1 being least and 5 being most.	1 – 30 2 - 38 3 - 92 4 - 94 5 - 59	3.26, 59, 4	7.94	2.14

Table 12 showing figures for Likert scale for initial questionnaire (see list of tables/appendix A)

4.1.2 Open Questions Analysis of Initial questionnaire

There were four open questions used to assess the user's social media experience. Beginning with question 9, respondents were asked to suggest anything they wished their mental health/mood tracking app could accomplish (question 9, appendix B). The primary topics identified in the replies using preliminary codes were "advice," "inspiration," "tips," "exercise," and "end of day summary". Users responded with phrases like "having a mode where you can block social media notifications and set useful reminders" and "a location where I could write and put my ideas down," implying that their existing mood monitoring applications did not meet these requirements and needs. Another user stated, "Have a food journal so I can observe whether my diet is also impacting my mood" (Question 9, see appendix B), demonstrating the relevance of nutrition in mental health and how recording it may enhance both physical and emotional well-being thus supporting the literature that was found in the previous chapter.

Taking these replies into consideration, there was persuasion in considering developing a mood journaling app. To accomplish full confidence in this prospect, further questions about possible app features were asked. Such as, question 13 asked users how they wanted to track their moods while using applications like Instagram or TikTok. The most common preliminary codes were "reminder," "scrolling," "notification," and "self-aware" (question 13, appendix B). Users said they would want an array of "mood options" and "daily reminders at the end of the day." Other participants also mentioned factors like "iPhone screen time" and "quick brief replies or using buttons (like smileys)". All these replies alluded to potential features that may be used for subsequent future adoption thus, assisting in the creation of a detailed user requirements list.

Next users were asked, what kind of data they would like to receive in regard to using said apps (question 14, appendix B). Flooded with responses, users expressed the need for statistics on "time spent on each app," "how it influences how we see and engage with relationships," "what app has the greatest usage on days I'm most stressed/down/happy, etc," and "a daily grid displaying hours I have spent on social media vs the general mood for the day." Each of these recommendations performed intriguing features that, if not already implemented,

could be added to a future journaling app. Based on the overwhelming reaction, it was apparent that there was a significant customer demand and need for an app that satisfied user requirements to promote healthy emotional wellness.

Lastly, in a manner similar to Table 11, users were asked whether they would be interested in “daily, weekly, monthly, and yearly study of their mood in connection to activities and app use” as well as open answer justifications to their response (question 16, appendix B). There was a resoundingly favourable reaction, with users justifying their responses with statements such as, “I believe it would be extremely interesting to observe how social media has impacted me” and “so I can analyse if I made any improvement or if my mental health/mood is deteriorating” (question 16, appendix B). Users believed that a feature like this on an app would significantly enhance their productivity and mental health, reflecting the major code of “increasing productivity,” offering considerable proof in the advantages of utilising a mood journaling app.

4.1.2 Initial Questionnaire conclusions

Overall, this questionnaire revealed valuable information into how users perceive social media. Using a combination of open and closed questions, there proved to be the opportunity to gain a deeper understanding of how customers feel about their time spent on Instagram and Tik Tok. One of the challenges involved completing the questionnaire in such a short amount of time and using a large number of closed questions rather than open ones. Given the high number of responses, this may be resolved by designing a follow-up questionnaire wherein respondents may offer more in-depth perspectives on their experience.

4.2 Second Questionnaire Findings

This questionnaire was conducted on the 6th of February 2021 employing 11 open and closed questions with over 2,000 participants responding to this study. In contrast to the previous questionnaire, this one provided a fresher approach to the answers that participants had given. Although there was a decrease in the number of participants who took part in this study, many users were still very open to talk about their experience with social media.

Although it is natural to expect the results of this questionnaire to favour a neutralised user experience, on this occasion this study mirrored the previous methodology and obtained a the same negative response from users, proving the hypothesis that “there was negative responses from users responding to questions about social media in this questionnaire”. When conducting the questionnaire, it is important to note that there was a 24-hour restriction for users to fill in their data, users only had 24 hours to view the Instagram story and fill in their answers. This restriction had no effect on the comprehensive replies provided by users; many users were open to convey their interpretation of social media even without the probes. To analyse the findings of the questionnaire descriptive statistics, preliminary code analysis, was used (see appendix C).

4.2.1 Second Questionnaire descriptive statistics and open questionnaire analysis

Beginning with the descriptive data provided by the questionnaire, the questions of age, location, and gender were found to be irrelevant in this study. Instead, users were asked if they use Tik Tok or Instagram; 55% said Instagram, while 29% said Tik Tok (Table 13, see appendix D). This data suggests that there are more Instagram users than Tik Tok users; however, this might be due to the questionnaire being conducted only on Instagram, causing bias in the responses. Surprisingly, 15% of participants replied with “both,” implying that consumers utilise a combination of both (Table 13, see appendix D)

1	Do you use Tik Tok or Instagram	Results
A	Tik Tok	574 (29%)
B	Instagram	1,072 (55%)
C	Both	300 (15%)

Table 13 showing figures for participants who use social media in second questionnaire (see list of tables/appendix D)

After that, users were asked if they thought spending time online helped them during lockdown. 60% of users said yes (Table 14, appendix D), implying that there are more advantages to utilising social media during a pandemic than disadvantages. Users also gave additional responses as to why it has or has not helped; the negative response was significantly greater than the positive response in this instance. According to the findings, many users believed they used the app simply for "boredom" or to keep them "busy" (question 2 see appendix C), emphasising the positives but implying a possible negative connotation. Although the advantages outweigh the drawbacks, replies indicate that users may have believed it was an essential required commitment to have social media amid global pandemic when communication with others would otherwise be difficult.

2	Do you feel like spending time online has helped you during lockdown?	Results
A	Yes	1,451 (60%)
B	No	970 (40%)

Table 14 showing figures for participants answering if using social media has helped during lockdown in second questionnaire (see list of tables/appendix D)

The second question posed to users, was how much time they believed they spent on Instagram/Tik Tok during the lockdown. A startling 46 % of users reported spending 3-5 hours each day (Table 15, appendix D). This shows the high levels of sedentary behaviour observed when users spend up to 20% of their day browsing through social networking apps. This data may also reveal the source of how users become addicted to social media, as 24% of users replied for more than 7 hours each day (Table 15, appendix D), highlighting the ubiquity of social media usage. Table 17 (see appendix D) indicates how users track the time they spend on applications; 87% of participants said they use screen time for iPhone, while 8% said they use another app. Following question 3 users were then asked what apps they tend to spend the most time on, respondents provided the answers using the facilities presented in Table 17 (see appendix D). 35% of users answered that they use Instagram, with 31% spending this time on Tik Tok; these responses were provided in the form of a suggestions box in the form of an open question. Surprisingly, there were a few applications that were not social media that users spent a lot of time on, such as "Netflix," "Pinterest," and "amazon prime," despite the fact that the findings were specifically looking for social media, this opened a connection to other apps that can affect the user's mental wellbeing. This may subsequently be incorporated in the app by providing statistical data on other applications, not just social media, therefore universalizing the preservation of mental well-being.

3	How much time do you spend on Instagram/ Tik Tok during lockdown?	Results
A	1-3 hours a day	200 (8%)
B	3-5 hours a day	1,121 (46%)
C	5+ hours a day	223 (10%)
D	less than an hour a day	176 (7%)
E	7+ hours a day	590 (24%)
F	I don't know I don't keep track	120 (5%)

Table 15 showing figures for the destinations of participants in second questionnaire (see list of tables/appendix D)

4	What app do you spend most of your time on?	Results
A	"Instagram"	154 (35%)
B	"Tik tok"	134 (31%)
C	"Youtube"	39 (9%)
D	"twitter"	32 (7.4%)
E	"Netflix"	25 (6%)

F	“Snapchat”	16 (4%)
G	“Whatsapp”	7 (2%)
H	“Pintrest	5 (1%)
I	“Facebook”	3 (0.69%)
J	“imessage”	2 (0.46%)
K	“discord”	2 (0.46%)
L	“Email”	2 (0.46%)
M	“Amazon prime”	2 (0.46%)
N	“clubhouse”	1 (0.2%)
O	“Microsoft Teams”	1 (0.2%)
P	“Google Meet”	1 (0.2%)
Q	“Reddit”	1 (0.2%)
R	“webtoont”	1 (0.2%)
S	“Tumblr”	1 (0.2%)
T	“CrunchyRoll”	1 (0.2%)
U	“House Party”	1 (0.2%)
V	“weverse”	1 (0.2%)
W	E Books (Kindle)	1 (0.2%)
X	“safari”	1 (0.2%)
Y	“messages”	1 (0.2%)

Table 16 showing figures of what apps users spend the most time on in second questionnaire (see appendix D)

5	What do you use to keep track of your spending time on Instagram or Tik Tok ?	Results
A	Screen time for Iphone	2407 (87%)
B	Screen time for android	120 (4%)
C	Another app on my phone that keeps track	220 (8%)
D	I don't use anything to keep track of time on apps	30 (1%)

Table 17 showing figures of what users use to keep track of time when on Instagram and Tik Tok in second questionnaire (see list of tables/appendix D)

Following that, individuals were asked if they believed their time spent on Instagram and Tik Tok was healthy. Predictably, 835 of users answered with “no,” demonstrating their self-awareness, while 17% responded with “yes.” (Table 18, appendix D). This question focuses on determining how much users understand about how social media affects them; the significant disparity in results demonstrates that a solution is necessary to assist the majority of users in either lowering this time or establishing a healthy balance.

6	Do you think that it is healthy to spend the amount of time that you do on Instagram and Tik Tok?	Results
A	Yes	320 (17%)
B	No	1575 (83%)

Table 18 showing figures of question 6 in second questionnaire (see appendix D)

Question 7 was a general refresher question that determined the sample size and population. As predicted, 87% of respondents were users, while 13% were content creators (Table 19 see appendix D). Although there is a substantial discrepancy, this permits the research to have some representation from both. In fact, there are many more consumers than content providers, as this figure clearly demonstrates.

7	Do you use Instagram or tik T.O.K to create content or just use it to like stuff and keep up to date with friends and family	Results
A	Content creator	232 (13%)
B	User	1561 (87%)

Table 19 showing figures for question 7 in second questionnaire (see list of tables/appendix D)

Similar to the preceding study, a Likert scale was used to obtain data on what users felt about the phrase "social media negatively impacts my mental health." The majority of users agreed with the statement, indicating that 44% of users are aware of the negative impacts of social media on their mental health (Table 20 see appendix D). The table below (Table 20 in Appendix D) provides descriptive data for all variables utilised in the Likert scale; the average mean of the 1504 participants was 1.09. (SD 1.06).

8	How far would you agree with this statement "social media negatively affects my mental health"	Results (1504 ppts)	%	Mean	Standard deviation (SD)
1	Strongly Agree	657	44%	1.09	1.06
2	Agree	200	13%		
3	Disagree	150	10%		
4	Strongly Disagree	33	2%		
0	Neither	167	11%		
0	Not sure	297	20%		

Table 20 showing figures of Likert scale from question 8 in second questionnaire (see list of tables/appendix D)

In between these questions, there was an open question asking the user what components on Instagram/Tik Tok trigger unpleasant thoughts/anxiety-like behaviours. After receiving over 100 comprehensive replies, users cited many factors, the most prevalent of which were "fear of missing out," "unrealistic beauty standards," "body image," "toxic trends," "fake news," "expectations," and "negativity" (question 9, appendix C). These factors aided in determining what causes users' depressed symptoms on social media. One user offered an intriguing remark suggesting "too many filters or Photoshop which makes individuals think they are not attractive enough and it makes you recognise that beauty standards are not for you," demonstrating the breakdown of the cause of negative thoughts and how it occurs.

Based on the replies to the preceding question and the significant number of users who said that fake news was a major cause of their mental health worsening, a brief question was given to see if fake news exacerbated their anxiety. 58% of users agreed that false anxiety was a contributing factor to their anxiety-related sentiments, whereas 42% did not (Table 21, appendix D). This emphasises the impact that false news has on consumers' mental health.

10	Do you think fake news on Instagram/Tik Tok has increased your anxiety?	Results
A	Yes	827 (58%)
B	No	609 (42%)

Table 21 showing figures of question 10 in second questionnaire (see list of tables/appendix D)

Prior to the survey's conclusion, participants were asked how Instagram and Tik Tok help with their mental health. This was necessary in order to have a balanced understanding of both sides of the effect rather of focusing just on one. Users reacted with an abundance of replies, many of which were identical to the preceding question about how social media assisted them during lockdown (question 2, see appendix C). Many users responded with, "temporary distraction will create issues later on in life", "Tik Tok is a great distraction, but Instagram is so draining", "I use it as a distraction to look at pretty pictures", "yes it is a great distraction and tool to laugh and relax" (question 11, see appendix C). As previously stated, the most often used terms were "distraction" and "images," which signifies positive yet unfavourable effects.

4.2.2 Second Questionnaire Conclusions

To summarise, this study yielded substantial data that were otherwise neglected by the initial questionnaire. The initial hypothesis was satisfied, and vital information was obtained through the manner of in-depth questioning. The data gathered in the first questionnaire was highly generic and not particular to Instagram and Tik Tok; therefore, by using specialised language, better insight into the use of Instagram and Tik Tok was achieved. Data gathering was developed and presented using preliminary codes and descriptive statistics as analytical methods. The primary findings that came as a surprise were the other applications that consumers believe have an impact on their mental health, such as streaming services. As a result, rather than focusing the data just on social media, a possible integration may be introduced during the app's creation to be inclusive of other applications, allowing the target audience to be reached while also being collaborative of other users. The final few questions focused on the features of the developing app, and people piled the suggestions box with elements they would want to see incorporated on the app. As a result, satisfying user demands and criteria became an effortless task. The next step will be to interview individuals about their social media experiences.

4.3 Interview Findings

By adopting distinct and recognisable themes, cohesive data was gathered that proved beneficial for the report. The interviews were first transcribed, then coded using a range of relevant and applicable codes (see appendix F). To maintain privacy and protection of users, replacement names were addressed in the data presented below.

4.3.1 Theme: Control

One of the most common themes that were presented throughout all 18 interviews was Time. Mackay reports, only 10% of people feel “in control” of how they spend their time each day (Jory Mackay, 2018). Respondents expressed their thoughts of the term via both positive and negative meanings, with contemptuous judgements being the most common. Several different ideas were combined to initiate this exploratory code, such as how time was spent between users on Instagram and Tik Tok, to their opinion on if time was spent wisely or wastefully. This resulted in time being the final code. The following are some instances of how participants felt about time:

Jouri: .. I think that I spend A LOT of time on Instagram but I'm working on reducing my time on any social apps as it's kind of affecting me physically and mentally. (see appendix E, interview 6 question 2)

Jouri discusses how she believes that spending too much time on Instagram has had a negative influence on her mental health. This exemplifies one of the primary reasons why this research project was undertaken. It is critical to recognise how people are influenced by their digital lifestyle on a daily basis. Furthermore, Jouri also emphasises that she is striving to reduce her time spent on social media, taking the initiative to find a solution and effect positive change. Perhaps this solution can be aided with a mood journaling app that can help keep track of how the time is spent and allocate better options.

Maryam:... I definitely spend way too much time on Instagram aimlessly scrolling through my explore page. I've tried using downtime from my settings which sets a time limit and locks you out of certain apps but then I removed it. I am too dependent on Instagram as an escape mechanism which isn't healthy at all. (see appendix E, interview 7 question 2)

Maryam recognises that she spends too much time on Instagram, as a result, she has developed an "escape mechanism" that has a negatively influenced her health. She feels that, despite her efforts to establish Instagram limitations, she still finds herself returning and lifting those restrictions to continue browsing and scrolling. This demonstrates how addicting people find social media even after realising that the activity is "aimless." When confronted with such viewpoints, the thought of creating a mood journaling app to assist individuals reprompted. The notion that, if consumers could see the actual impact that apps like Instagram and Tik Tok had on them, they would be able to prevent future mental health damage.

Rabiah:... So I've actually set myself a timer and that's three hours per day that I spend on Instagram and usually by the end of the night that notification does come up to say that I've now reached that

three hour limit so on average I'm spending 3 hours on Instagram to me that is quite excessive (see appendix E, interview 9 question 2)

Rabiah highlights that she has tried to reduce her time spent on Instagram by using the self-timer option on her phone, and while this has significantly reduced her Instagram activity, she stresses that the average time of 3 hours she still spends today is still rather high.

Mirroring the questionnaire, when users were asked the question of what their thoughts were about social media addiction the two codes proved to be the most common was “definitely” and “both”. Below are examples of statements users had said regarding social media addiction.

Interviewer: Do you think there is any solution to this growing issue of addiction to social media? E.g. screen time or something you use to keep control etc and Is it the social media's fault or is it the user's for getting themselves so addicted? and If social media sites value the protection of their consumers, for e.g. privacy, should their mental health come under that protection? (see appendix E)

Taslim: I think it's both the user's fault and the application developers' fault for the addiction, the user should have some restraints in place but perhaps developers should introduce the possible addiction that can happen from overusing the apps. Of course, they cannot control the user but there should be some safety features pre-installed, age should not be the only question asked before users join. (see appendix E)

Hiba: Response: I believe self-discipline is honestly the real solution. There are many things to help us use our phone less but they're all very easy to ignore. Maybe if we had something to help limit notifications, that would help us lessen the time we spend on our phones it just comes down to self-control...these platforms should do a better job of having more options that promote a normal amount of usage. (see appendix E)

Abrar: I think they are both equally blamed for addiction. Because a user needs to manage their time and control themselves and social media or the creators, must stop taking advantage and coming up with new creative yet addictive content. (see appendix E)

Jouri: I started using social media a lot less when I stopped comparing myself to others. Also, I unfollowed everyone who don't make me feel good even if we're friends and made sure my circle is as small as possible. Now I only follow people who inspire me and make me feel good about myself. (see appendix E)

Rabiah: developers are fully aware of the impact social media is having on the people and they are responsible of course because they control the algorithms, and they control what they want us to see. The other aspect is Instagram is how everything is becoming monetised, so people are now making money and those that are on social media, the influences the bloggers and you know everyone in that realm they are trying to monetise off their offerings and I feel like that has had a huge impact on people as everyone wants to put the best out there. (see appendix E)

All of these remarks have one thing in common: they all agree that the consequence of addiction is the responsibility of both the user and the application. Participants Hiba and Abrar state that it is the user's responsibility to introduce self-discipline to decrease addiction. Rabiah emphasises the economic consequences of addiction on companies and how, as a result, it may be difficult for developers to collaborate when it comes to the mental health of its consumers. Demonstrating that addiction is a significant benefit for them.

Participants also has a similar reaction when they were asked, “Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?”:

Momena: I don't think they're actively trying to change that as again that's good news for them. They in fact are continuously adapting the platforms to make it even more engaging for individuals. (see appendix E)

Abrar: Surprisingly no, because everyone is responsible for their own selves and you should be able to decide what is too much and too little of something, basically having a sense of self control. At the end

of the day it's their job and they're trying to make a living out of peoples misery which is unfortunately the case nowadays. (see appendix E)

Aliyah: I think apps are addictive because of the intention that developers put in when creating the apps so yes developers definitely should be responsible for exploiting user addiction. (see appendix E)

These discussions accentuate the necessity of admitting that it is both the users' and the developer's fault. Although it is easy to criticise large digital firms such as Instagram and Tik Tok, it is critical for users to accept responsibility for the situation and practise self-control, as Abrar and Aliyah have stated.

4.3.2 Interview Conclusions

The study was originally intended for face-to-face interviews; however, due to the current global pandemic and the restrictions imposed, the survey was performed online. The data collected were extremely thorough and evidence-based, and theme analysis was utilised to highlight the findings. One of the threats thematic analysis posed was the danger of subjective judgement, although participants presented clear responses the findings may disclose missing subtleties in the data. This may result in a subjective judgement that other researchers may not agree with.

The use of opportunity sampling also proved a high chance of subjective and biased data being present. Even though the data gathered was successful, the bias was evident in the significant disparity between male and female participants. There was also discrepancy in age representation, since many participants were between the ages of 15 and 28, raising the possibility of participants overrepresenting the sample size. However, I believe that the large sample size balanced out the bias and subjectivity because it included people from all over the world rather than just one region.

The general experiences while conducting these semi-structured interviews were that it was an extremely time-consuming, labour-intensive, and laborious process that required extensive preparation. The task of analysing the massive amount of data and transcripts also added to this time. On the other hand, an underrated positive experience involved the structure of the interview. Because the interviews were conducted via direct messaging, there was less pressure on the participants to maintain time or take breaks as they had the freedom to respond within a time frame that best suited them.

However, the data gathered suggested a new demographic and method of conducting interviews, both of which were interesting to attempt and proved to be effective. Furthermore, all of the interview's hypotheses were met by a great number of users displaying "a negative opinion about Instagram and Tik Tok in comparison to those who do not," as well as a majority displaying "traits of their emotional health being impacted by the use of Instagram and Tik Tok," and finally, users responding positively to the idea of developing an app that can sustain mood tracking.

Chapter 5

Design and Implementation of Telekonnnect application

This chapter will be focusing on the design and implementation aspects of the application that is being developed. The decision in developing such an application resulted from research that was obtained through online questionnaires and interviews. Whilst conversing with different user groups, many users felt the need for a tool that could aid in their negative experiences and thoughts when navigating Instagram and Tik Tok. Instagram and Tik Tok have proven to host platforms where users feel disconnected and almost left out from the world. Users have reported feeling obliged to compare and acquire similar interests to feel somewhat secure and adequate in the social aspect of society, which proves to be the start of a dangerous "slippery slope" for negative thoughts for some.

This part of the project focuses on creating a life-changing mobile application that aims to use the necessary tools in assisting users express their emotional health with the characteristics of a journal. The objective of the application is to assist in monitoring the mental health of user's using a variety of features such as sleep tracking, a daily diary of mood entries, physical health and much more. The app hopes to open the door to tracing other symptoms of behaviour that are not already visible and potentially intercept these them. A 2014 study reported that smart phone-based interventions can provide substantial enhancement in the wellbeing of users (Howells, A., 2016). Motivation and confidence elevated after obtaining positive comments from users who described needing such an app. There is also the economic element of identifying a market need for a product that caters to the culture of everyday activities that a consumer performs when using a smartphone. Furthermore, when addressing "the relevant culture of activities," this involves gathering data that most transparently portrays users to offer an authentic representation of emotional wellness. The main intention for the product is to focus on how social apps like Instagram and Tik Tok can impact mental health. Through the familiarity of journaling, this app will work to note downtrends and occurrences of specific moods concerning daily activities and physical health, encompassing what makes you feel better and what makes you feel worse through the presentation of statistics.

5.1 Existing Systems and Research

Although users have proposed several features and designs that they would want to see implemented on the app, it is critical to examine the existing software to acquire deeper knowledge of customer expectations and requirements; this allows for a greater product contribution to the market. In this section of the report, I will be reviewing 3 existing applications that serve the purpose of journaling/mood tracking.

Before starting, a systematic search for mood tracking and mindfulness apps made through using the Apple app store. This eliminated any irrelevant applications like games, reminder, and relaxation apps while also providing insight into the selection of apps that users are presented with. Whilst also narrowing down the apps with higher ratings which aided in the selection of reviewing quality featured software. The applications that stood out the most was the Flo, Head space and Mood diary.

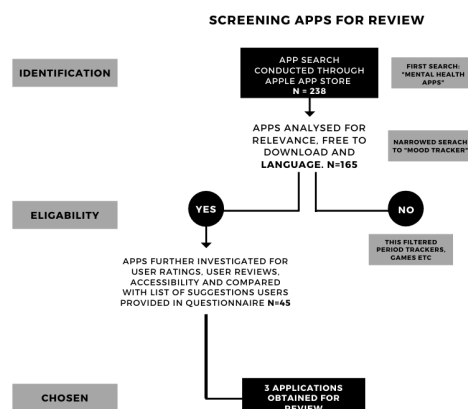


Figure 1 showing a flow chart of screening apps (see appendix G)

5.1.1 Flo App

Co-founded by Dmitry and Yuri Gurski, Flo is a mobile menstrual app that focuses on capturing the monthly cycle of an average ovulation interval (Flo). The application's popularity stems from more than simply giving a calendar overview of cycles; it also empowers users to take charge of their health through an online community. The application forecasts evidence-based information from medical health professionals to provide the latest advice when taking care of reproductive health. Many articles are published weekly, guiding and educating users into their monthly cycles, symptoms, fitness, keeping a healthy system and so much more. Recently the app introduced a safe place for users to have an open discussion on their thoughts and ask for support; by keeping users anonymous, the app enables confidence when users ask questions to the forum. The application is subscription-based, where the user can initially download the app for free and then later proceed to select a plan that best suits their needs. It costs the user £5.99 per month or £29.49 a year to unlock certain features enabled by the app (as shown in Table 13), this includes expert advice, accessing the forum, discovering informative articles (education system) etc. If the user remains unsure, they can use the free trial to experience the full service of the app. The basic functions of logging symptoms and cycle dates of the app remain free, using the information of symptoms and dates the app also provides the user with a prediction of their next cycle and possible diagnosis/side effects (Flo).

The unique feature of the app is what makes it so universally favoured by users. From this evaluation, similar functions will be reflected in the upcoming application. It is crucial to involve great features that are celebrated by users for their representation of the community, the feature of providing insights into articles that can help diagnose symptoms is an effective way of improving one's health, as a result, this will be implemented into the final application. Another feature that stood out was the subscription business plan; because the app is free for its basic features, the plan recognises the efforts required by experts and health professionals to present valuable data; consequently, the plan provides support for the insights rather than just financial gain. Lastly the logging symptoms page for the app expresses a narrative that deems essential for the implemented app; when users enter symptoms to monitor their cycle it includes a wide range of categories such as, Moods, weight, sleep tracking, water intake, notes etc. This emphasises the significance of documenting information that can subsequently be utilised for diagnosis and in-depth analysis, a similar feature will be inspired for the developing app.

5.1.2 Head Space App

Another application infamously known for its aid in psychological distress, is the Head space app. Conjuring over 300 ratings and being in the top 10 list of apps for health and fitness, the app provides a meditation-based tool to aid users with stress, anxiety, sleep, and focus (Headspace). The app offers a huge range of features from different meditation techniques to educational videos to reduce stress. The features which stood out included the tracking of progress, where the user can track their progress and time spent meditating (Headspace). As mentioned in previous research, mood tracking is a crucial feature for users when it comes to understanding mental health (Caldeira, C., 2017). This feature will be implemented through users tracking their goals, achievements, and other mood habits. Similar to the Flo app, headspace offers a subscription-based service where the user can also gain a free trial to experience the full benefits of the app before selecting a plan that best suits them. The Annual subscription fee is £29.99 whilst the monthly fee comes to £9.99 (as shown in Table 13). There are also plans for students who can gain free access for the first 6 months and then pay a reduced price after that. This exemplifies inclusivity, where the application has identified its demographic and inherited economic accessibility for its users (Headspace). It is also important to note that there is scientific evidence supporting the statement that "Headspace is associated with small improvements in distress for university students" (Flett, J.A., Conner, T.S., Riordan, B.C., Patterson, T. and Hayne, H., 2020.).

5.1.3 Moodnotes – Mood tracker App

This application focuses on the journaling of emotional health. Focusing on capturing negative thought patterns and seeking to identifying them this application aims to develop healthier habits for its users (Moodnotes). Using tracking moods, the app attempts to increase self-awareness and decrease the users' emotional stresses. The key features include, journal-like characteristics such as using images to illustrate activities users have completed throughout the day and presenting a wide range of pictorial emojis to describe how the user is feeling. The app also hosts text articles for users to gain understanding into possible psychological symptoms and advice from health care professionals. Continuing the theme of the previous financial plans, Moodnotes also runs on a subscription-based service offering an annual fee of £38.99 and £9.99 monthly (as shown in Table 13) with a free trial period too (Moodnotes). From this application it is important to inherit the features that users

will value the most and this includes the adding images option. Allowing the user to summarise their thoughts with an image rather than text can provide an efficient option which is significant in mood tracking, Zhu reported that using images automatically expresses the gist of text (Zhu et al., 2007).

Below summarises a table of summary of the reviewed applications features:

App	Mood assessments/ Cognitive procedure	Sedentary Behaviour required to use App?	Reminders	Insights	Symptom tracking	Sleep tracking	Community	In-app purchase	Cost	App store Rating
Flo	Yes, Concentration , self-analysis, Noting, Static	Yes	Yes	Yes (weekly-yearly)	Yes	Yes	Yes, online annon community	Subscription service but free features/trial available	Free to download Annual: £29.49 Monthly: £5.99	4.7 (No2 health and fitness)
Head space	Yes, Focused attention, self-analysis, Static	Yes	Yes	Yes	No	No	Yes, online community of advisors	Subscription service but free features/trial available	Free to download Annual: £29.99 Monthly: £9.99	4.8 (No 8 health and fitness)
Mood notes	Yes, Passive observation, introspection, Concentration , Static	Yes	Yes	Yes	Yes	No	No	Subscription service but free features/trial available	Free to download Annual: £38.99 Monthly: £9.99	4.5

Table 22 shows summary of reviewed applications (see appendix H)

5.1.4 Rules and Theories Interface of Design

In the design process interaction design theories should be implemented to ensure that the product will fulfil its purpose. To design a useful and effective interface, research into the theory of Schneiderman's Eight Golden Rules of Interface Design suggests (Wong, E., 2019):

1. Strive for consistency – helping the user to become familiar with the interface
2. Enable frequent users to use shortcuts – faster methods for users to complete tasks
3. Offer informative feedback – keeping the user in the loop with the current workflow
4. Design dialogue to yield closure – advising the user of what action they just carried out
5. Offer simple error handling – to help the user solve any issues they may encounter easily
6. Permit easy reversal of actions – to allow the user to undo any mistakes
7. Support internal locus of control – to ensure the users are the initiators of any actions
8. Reduce short-term memory load – a simple interface for a user to recognise rather than trying to recall how to operate it

Upon researching into the above theory, the theory of KISS (Keep It Simple Stupid) was also encountered. (Mooney Jr, C.W., 2015). This theory defines the principle that if a user cannot understand a product, then they will be unable to use it properly. For a product that would be presenting a lot of statistics and data to the user, it is important to remember that the application should be fool proof and accessible to a wider audience, not just experts. Bhandari also denotes that “Affective responses are induced by design-based factors like visual aesthetics. Objective and subjective measurements are necessary for capturing emotions.” (Bhandari, U., 2017). Utilising the following theories, I will be composing a functional app that provides satisfactory navigation for the user.

5.2 Target Audience and Requirements

5.2.1 Target audience

The first step in creating an application is the configuration of requirements. Given that 78% of the user groups were between the ages of 18 and 25 when the research was conducted, it is critical to recognise the high percentage of youth that use social media. This is because, the target audience for the application may prove to be the most useful within this age bracket. It is vital not to neglect the data of social media users who are not in this age group, as the application may be equally beneficial to them. It would be unwise to assign a set age range to a cathartic product, which is why the app is appropriate for anybody above the age of 4. The social development of language and cognitive capacity often begins at the age of four, indicating that anybody beyond this age may benefit and enjoy the application. This removes potential limits, increases accessibility, and provides parents with the chance to monitor their child's mental well-being.

5.2.2 Application name and business plan

After ample research, the name of the application will be Telekonnnect. The name was inspired by the term “telepathy” and “telekinesis”, telepathy resembles ability to read minds and telekinesis is the ability to move inanimate objects with the mind. Which concludes the functionalities that the app will possess, where it may not be able to read minds, but it is essentially performing analysis that could substantially predict symptoms and trends regarding the brain. The business model that will be used for the application will be a similar to the existing apps that were reviewed previously where it will be a free app with a subscription service to extra features and services. This is due to the fact that it is the most cost-effective method for maintaining some sort of economic income to finance the app while remaining accessible.

5.2.3 Sketch and outlining the app

Before outlining the user requirements, this section will provide an overview of Telekonnnect’s functionality. A preliminary design for the navigation of the app was produced by focusing on a minimum of 4 menu options, the calendar, the entries page, the stats page, and the settings page (figure 2 see appendix I). The user will be presented with all 4 menu options in a dock at the bottom of the page/screen from which the user can browse from; this kind of layout is commonly utilised in most applications, which helps to retain user familiarity. When a user initially registers for the application, the first page that they come across will be the calendar page. This will have a graphical interface of a calendar from which the user may select different dates and insert diary entries.

Upon researching existing apps, the Flo app inherited the use of a calendar to display cycles, which inspired the requirement for such a function in this app, that would allow the user to preview previous entries and insert new ones whilst remaining simple and straightforward. The user may then choose the next icon on the dock, which will take them to the entries page. This page will display all the recent entries that the user has completed in the last week. The user can also create new and amend previous journal entries on this page.

The entries page offers a distinct configuration for how the user reads their recent journal entries, allowing them a new perspective. The concept is to arrange the entries in a column of boxes that are emphasised by the mood and activities that they have performed. The contents of the stats page will represent the user's data through visual statistics, each statistic will be collected through a variety of sources such as, mood charts, tracking of sleep, app usage analysis, average Mood, achievement, and goals.

Delving deeper into the sources of the data, sleep analysis will display the average amount of sleep that the user gets and how it interacts with different moods. A mood chart will represent an overall summary of the user's different moods throughout the time it was collected. The app usage analysis will gather the various emotions that the user has felt while using the apps that they have registered to track. Average Mood will decipher the mean range of moods that the user has felt throughout the week/month/year. Lastly, achievement and goals will present the different targets that the user has completed so far as well as future aspirations too.

The last page and menu option on the app will be the settings. This page will include all the preferences that the user may wish to change such as, subscription plan, theme settings, back-up and restore options etc. The focus of this wireframe sketch was to implement rough notions of how many pages it would have and to give a comprehensive annotation of each step (figure 2.1, 2.2 appendix I).

5.2.4 User Requirements

Acknowledging the user requirements remains an integral part of design and implementation. The ISO 13407 standard reports the user begins with a thorough understanding of the user needs and requirements (ISO, I., 1999.). A list of 14 Essential, Important, Attractive and Non-Essential requirements was developed to accomplish this. As shown below (Table 14), one of the most crucial requirements for Telekonnnect was for the user needed to be able to understand the weekly analysis/statistics given within the app. This requirement is focused on the study and summary of the user's weekly experience; data will progressively accumulate to become monthly, and finally annually visual statistics. The significance of this requirement is defined through the help of algorithms where the user to detect patterns/changes in their emotional wellness to acquire a better knowledge of how their mind functions, following everyday activities. Mood Chart, App Analysis, Mood count, Achievements/goals, Average mood are just a few examples of how the user's data will be presented on the stats page; often each of them may be examined in combination.

5.2.4.1 User Requirements Table

To coherently represent the requirements, the set of criterions were defined and evaluated through the table listed below:

1. The user needs to be able to understand the weekly analysis/statistics given which will build through to follow on to becoming monthly and then annually.
2. The user needs to be able to keep their personal information and data backed up in cloud form securely
3. The user needs to be able to schedule the time for the notification drop bar
4. The user will be able to customise what apps they would like to be enabled to receive the push notification for
5. The app must be able to successfully coexist alongside other apps
6. There must be a simple sign up/sign in option so that data can be backed up and accessed anywhere and anytime by the user
7. Ability to track the days of the user's personal emotional health journey.
8. The user must be able to access other health apps for mental health benefit
9. User will be able to use a Pin-lock to keep data safe
10. The user must be able to set and track their own achievements and goals
11. Doesn't feel too invasive when the user is navigating other applications on their device
12. The user must be able to access Journal entries via the calendar interface
13. The user will be able to put in symptoms, weight, water intake and any other measures of healthcare when inputting diary entry.
14. User will be able to customise colour themes and choose their own preferences for the app i.e., light/dark mode

Presented below are the detailed evaluations of each requirement:

Priority	Requirement/Testing	Explanation
Essential	The user needs to be able to keep their personal information and data backed up in cloud form securely	To protect the user's privacy and guarantee that they can retrieve their data at any time, the app will be configured to allow them to back up their data to their preferred private cloud medium. Transparency will be preserved by telling the user that the data will be saved locally on their device until they feel comfortable to backup it to the cloud. This guarantees that the user has full autonomy over their data. This requirement is derived from recognising the sensitivity of using an app that stores personal data. The Data Protection act highlights importance of this ethical issue, and the legal consequences if the user's data is not rightfully protected (Data protection GOV.UK).
Essential	The user will be able to customise what apps they would like to be enabled to receive the push notification for	It is crucial for the user to be able to select which applications they want to receive push notifications from, otherwise it may seem limiting in terms of what they want to keep track of. This

		requirement's functionalities will feature toggle buttons that allow the user to pick which applications to enable. The notifications page where they can select will also contain a text box where the user can enter the time interval for the app to release the push notifications. This feature was motivated by personal experience with an iPhone; looking at how we can pick which applications have access to the camera and how we can send notifications through the notification bar. In carrying out the setup of choosing push notifications, the user not only gains control, but this also encourages the user to build new habits and increase the frequency of data that they enter the app. Wohllebe confirms in a 2020 study that the frequency of push notifications are a central part for activating and binding app users thus, highlighting the importance of push notifications (Wohllebe, A., 2020).
Essential	The user needs to be able to schedule the time for the notification drop bar	This criterion focuses on allowing the user to schedule their own drop-down notification bar. For example, while the user is using another app, such as Whatsapp, this app will cause a notification bar to appear on the screen. The notification bar will ask the user how they are feeling, to which the user will respond either by dismissing the bar completely if it is inconvenient timing, or quick fill how they are feeling by holding on to the notification or pressing the notification to launch Telekconnect. The user may decide and customise the time at which the bar lowers down, where they can pick their own scheduled period. For example, 15 minutes. This will assist users in keeping track of any extraneous factors that may be affecting their mental health outside of their normal activities. The significance of this need is represented in the customisable functionality, as well as the production of advanced stats. Recognising that this requirement is acquired through control and visual stimulation of personalisation of settings, Li emphasizes that badges motivate users to contribute more to all types of activities (Li, Z., 2012).
Essential	The app must be able to successfully coexist alongside other apps	It is important that Telekconnect can operate when the user is using other apps. One of the primary features focuses solely on how much time the user spends on each app. If this is not executed properly, there is a danger that software will be disrupted. This assumes that the user would always have other programmes running in the background. However, a potential issue that must be investigated is how the app would recognise when the user has opened a new app if it was previously loaded as a tab, and whether the time intervals can be converted to a clock setting at certain periods. In a 2014 study it was reported that “the most frequent complaints were functional errors, feature requests, and app crashes” (Khalid, H., 2014). This highlights a potential issue in which, when the programme is built through the Apple/App Store, there may be numerous issues that must be dealt with, whereas it may operate more smoothly on Android.
Important	There must be a simple sign up/sign in option so that data can be backed up and accessed anywhere and anytime by the user	This criterion enables the user to maintain their personal information linked to a certain account. The requirement will concentrate on making it simpler for the user to login through third-party services such as Facebook/Google during the onboarding and login process. This was inspired by the notion that it is a basic accessibility need for the user to be able to login with ease and efficiency. Briant Wentz stresses the importance of having an accessible sign-up process through a study conducted on people with disabilities who struggled due to inaccessibility (Wentz, B., 2014).

Important	Ability to track the days of the user's personal emotional health journey	This requirement encompasses one of the main parts of the app. In addition to the user being open whilst journaling their moods, simple interactive buttons will allow them to register how they feel from a day-to-day basis. At the end of each week a summary will be formed where the user can track all their moods, and what they did when they felt that emotion. Depending on how long the user has been keeping track this will follow through to a monthly and yearly summary. This provides the opportunity for the user to look at the bigger picture and witness how many days they felt happy/confused/sad/angry etc. “Affective responses are induced by design-based factors like visual aesthetics. Objective and subjective measurements are necessary for capturing emotions.” (Bhandari, U., 2017).
Important	The user must be able to access other health apps for mental health benefit	The significance of this criterion derives from the concept that the user should be able to seek assistance when they need it, allowing the user to reach out for an extra hand during a challenging period. For example, if the user has noticed a rise in the frequency of unpleasant days, this may prompt the need to speak with someone about it; the app may give support before the user even needs to seek for it. When the programme detects an increase in negative feelings, it will display this information on the settings page or the homepage. This makes it easy for the user to receive the assistance they require with the simple press of a button. Cognitive behavioural therapy is a form of talking therapy that many psychologists use to help patients. Hofmann concluded that the efficacy of CBT for anxiety disorders was consistently strong, which further exhibits the importance of talking to medical professional when needed and engaging in forms of talking therapy (Hofmann, S.G., Asnaani, A., Vonk, I.J.J., Sawyer, A.T., Fang, A., 2012). This need was derived from personal experience with prior mental health applications that lacked a guide for useful links and contact numbers, as well as inputs made by users themselves during the research process. (Second questionnaire see appendix C).
Important	User will be able to use a Pin-lock to keep data safe	To ensure that only the user has access to their own data, they must be able to produce their own pin code. The evidence in a 2016 research study supports this requirement when concluding that PIN users take longer to enter their codes, but commit fewer errors than pattern users (Harbach, M., De Luca, A. and Egelman, S., 2016). The importance of this criterion is on the privacy and sensitive data at hand; the user must feel comfortable when using the app and having a pin lock provides an additional security precaution in the event that someone may have unauthorised access to their smartphone. The app will also include a customisable pin lock that allows the user to set their own pin, as well as other forms of security such as touch-id or face-id, depending on the device. This requirement was influenced by the security options in online banking apps; when we use internet banking, we are either asked for our password, Touch-ID, or Face-ID to safeguard and secure our information.
Non-Essential	The user must be able to set and track their own achievements and goals	Tracking personal objectives enables the user to form habits and accumulate accomplishments. This is a non-essential requirement that focuses on self-care and reflection of the user. This concept arose from reviewing different research and studies such as, Kelley demonstrating personal objectives reflecting a positive impact on students mental health. (Kelley, C., Lee, B. and Wilcox, L., 2017).

Non-essential	Doesn't feel too invasive when the user is navigating other applications on their device	For this criterion to be effective, the user must be greeted with the appropriate language and vocabulary. For example, when users are asked "Currently, how are you feeling?" via a drop-down notice, it should seem reassuring rather than intrusive. This requirement emphasises a calm approach that reinforces the user's desire for comfort rather than causing an inconvenience. It is recommended to use a positive visual framing in nudging people away from privacy-invasive apps (Choe, E.K., Jung, J., Lee, B. and Fisher, K., 2013).
Attractive/Non-essential	The user must be able to access Journal entries via the calendar interface	This requirement examines how the user will be able to utilise the app's key features to reflect on and monitor their day. The process will take the shape of a calendar system, with the user being able to zoom in and out to browse around various dates. This direction was influenced from the user's desire for capacity as well as the incorporation of a calendar's familiarity into daily records. Thus, Making it easy-to-use and accessible. The calendar page will be available from the app's main navigation dock, making it immediately accessible to the user. Enabling zooming in and out of functions, incorporates accessibility for users who may be visually impaired. Toggle buttons with vibrations will be introduced to help users understand what they are selecting. Kevin Lufkin deployed the use of a calendar interface and found it was a productive way for users to visually track their activity and progress (Lufkin, K., 2014).
Attractive/Non-essential	The user will be able to put in symptoms, weight, water intake and any other measures of healthcare when inputting diary entry.	Although this requirement appears to be significant, it focuses on just providing the user with more information that they may wish to submit that they have not previously. The requirement examines healthcare measures in order to provide the user with data that can assist them in tracking any red flags/progress in relation to their mood. Looking at water consumption, for example, could assist in tracking down why the user has been feeling more tired than normal recently. This criterion is concerned with the context of the statistics that they will get at the conclusion of each week/month/year. Banta reported "increasing levels of psychological distress were generally associated with lower mean servings of fruits, vegetables, and water" thus, tracking this data is compulsory for bettering overall health (Banta, J.E., 2019).
Attractive/Non-essential	User will be able to customise colour themes and chose night mode	This condition focuses on making the user feel at ease while selecting their colour choices for the app. The ability to personalise the software enables the users to feel more at ease in their safe space while also addressing control. Recognizing that this demand is obtained through control and visual stimulation by setting customisation, this implements accessibility for the application and conforming to varied settings for any circumstances the user may have. Infact, Kaya and Epps demonstrated the power of colour customization by demonstrating that the colour blue has a tremendous influence on mood, enhancing the calming qualities of nature (Kaya, N. and Epps 2004).

Table 23 showing the user requirements table (See appendix J for full table)

5.2.4.2 Functional Requirements

General guidelines on what the machine should be prepared to do or cope with:

- Capable of converting and mapping reactions into data that can be analysed, such as a graph or bars, to indicate which applications make people feel better or worse.
- Capable of updating profile.
- Capable of distinguishing if it should be activated on specific apps via flags.
- Capable of tracking when an app is closed and reopened.
- The ability to monitor how long the user has been actively using the application (this is important when the application automatically releases notifications for the user to come back)

5.2.4.3 Java and App Store Programming requirements

- The programme must be able to take data input from the user as well as additional user interface responses such as widgets (e.g., mood entries, today's plans, sleep schedule/tracking, and so on).
- Checkboxes, call to action buttons, text buttons, toggle buttons, drop down menu buttons, ghost buttons, plus buttons, and floating action buttons should all respond appropriately and effectively.
- The user must be able to sign up, register, and login with ease.
- Validation and verification of user data must be ensured.
- Must be able to locate pertinent quotations and emergency information for the assistance page...
- The system must be able to reference and transmit bespoke objects, as well as send them via various activities.
- Once the user has successfully registered, they should be able to select their own colour theme and change it on demand.
- The programme must guarantee that any alerts are provided with the user's permission.
- The user must be able to change their preferences and details at any moment, such as switching from bright to dark mode or updating crucial email/phone numbers.
- The user must be able to back up all of their information using a cloud service of their choosing, such as Google Drive, locally stored data, iCloud, and so on.
- The site should encompass user-friendly navigation.

5.3 Low Fidelity Prototype

This section of the report will focus on creating the first low fidelity prototype of the Teleconnect application. A prototype is a functioning model that is used to create and test design concepts. Prototypes can be used in online and software interface design to investigate content, aesthetics, and interaction approaches from the viewpoints of designers, clients, and users (Walker, M., Takayama, L. and Landay, J.A., 2002). When creating Teleconnect the application's design process required a significant amount of time. A preliminary wireframe for the user interface was formulated previously which conquered the layout of the app, now the low fidelity of the application was to be created.

The first concept for the interface suggested an overwhelming arrangement, therefore changes were made. The primary differences from the wireframe to the low fidelity were the menu options; instead of having complete menu options, this low fidelity had 5, replacing the calendar, entries, stats, and settings page, with an additional reminders page. The reminders page contains a basic page area where users can discover immediate control settings and create new journal entries; it has been put in the centre of the dock bar, acting as a potential homepage. The reminders page will also feature potential controls where the user can modify the app's aesthetic choices, such as the background image; in addition, the user can manage app notifications, track their sleep, and view the current time.

Utilising the interview and questionnaire theme analysis and statistics, the users' needs, and expectations were adequately fulfilled and as a result there was a total of two low fidelity prototypes. Both designs were digitally created with a combination of online web services and apps like as Canva (Canva website) and infinite painter (Infinite Painter App). As demonstrated below, the two prototypes featured a cognitive tour of what the process would look like when the user interacted with the application throughout the onboarding and sign-up process (figure 3.1 see appendix K). The app has a navigation dock at the bottom, as shown in the pictures below, which incorporates the extra page from the initial wireframe. The objective for this modification is to provide the user with easy access to the reminders page.

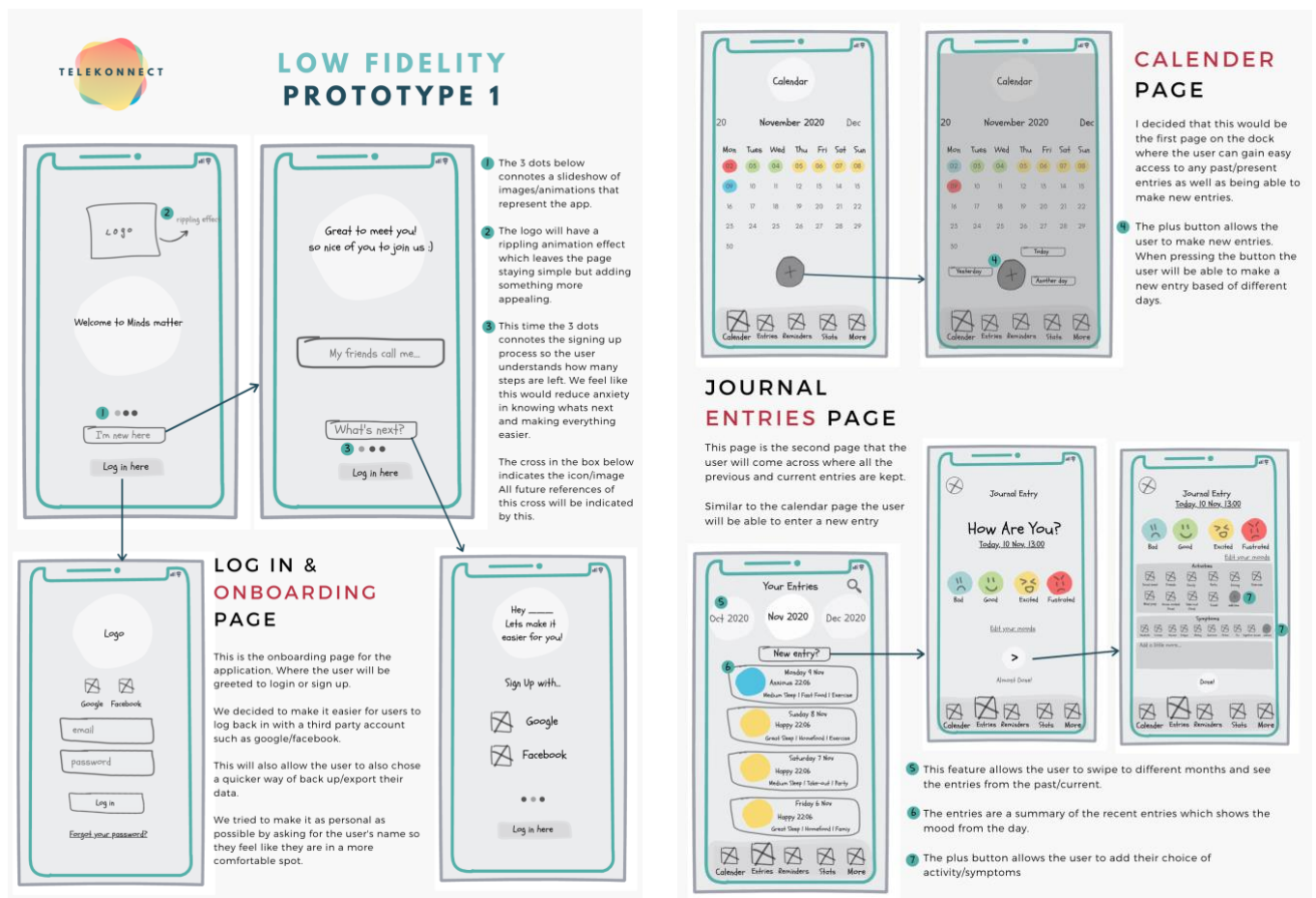


Figure 3.1, 3.2: Shows sketches and annotations of low fidelity prototype 1.

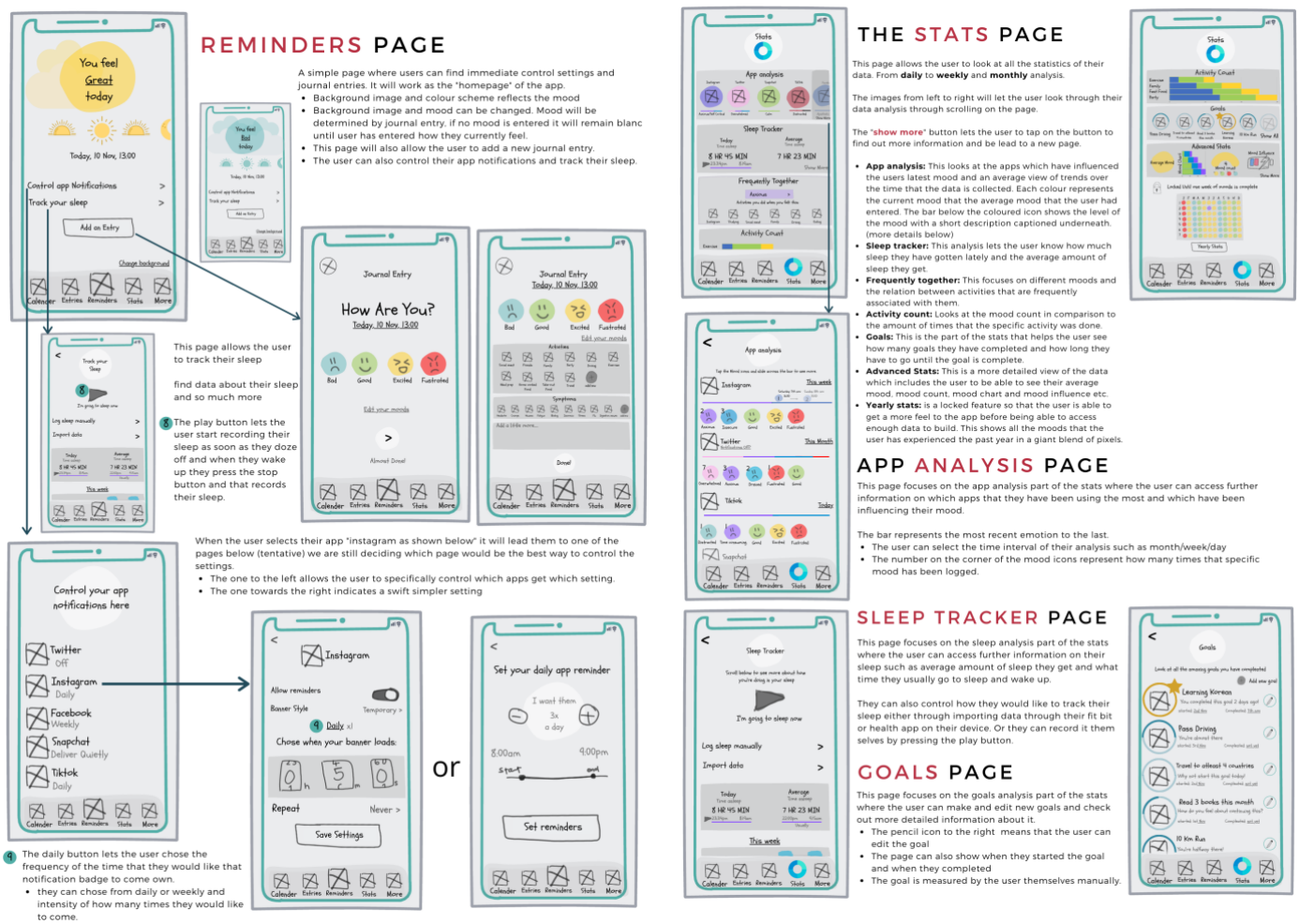


Figure 3.3, 3.4, 3.5 Shows sketches and annotations of low fidelity prototype 1 (see appendix K)

5.3.1 Evaluation of Low Fidelity

In this section of the report, the application's design will be justified through the categories of visual sequences, and overall interface. Beginning with the sequencing technique, the calendar page was initially the first page that the user is greeted with before advancing on to the more detailed pages as it was the least overwhelming. However, after careful consideration, the reminders page proved to be the most suitable as all the pages on the menu dock will have no data when the user first joins, rendering the reminders page the most appropriate following its simple settings. While designing the menu, the notion of a tutorial looked like an attractive feature to implement for the user when they first join as it would improve the onboarding process and lessen the user's difficulties understanding where to navigate and how to insert data.

Before moving on to the next step of the design, it was critical to ask users what they thought of the design this far. Due to time constraints, a brief interview was conducted with three participants. These interviews were conducted in an unstructured design, with users simply annotating with what they thought of the low fidelity design. The following quotes are from participants who made insightful recommendations about the application's design and potential improvements that they would like implemented for future designs.

"I believe the overall design is great, but it is really confusing having so many buttons at the bottom with no actual homepage. Even though the reminders page is simple I think it would be really cool if the application could have a simple homepage so that the user isn't invaded with lots of information when they join the app." (see appendix L). Taking in this analysis it is important that the user finds the interface and navigation of the app easy, maintaining simplicity is one of the major user requirements. Therefore, this response will be thoroughly implemented in the next phase of the design. changes will be made to wear a home page will be provided for the user rather than having a collection of different pages at the bottom of the screen as well as taking away any an essential information that is not useful for the user during the time of use.

Participant two revealed "The design of the application is great, and I would love to see the next phase of the app" (see appendix L). This comment highlights the positive connotations on the design of the app it is important to remember these highlights as it confirms that the design of the app is following the right direction and meeting all the user requirements.

Another participant said that "It would be really cool to see if we could edit the different moods instead of having strictly for moods" (see appendix L). This insightful recommendation focuses on in labelling more customizable components onto the app, providing the user with a function where they can edit emojis or images that is used to represent their mood meets the user need of control.

The following comment "I think the notification system is a great idea but for some users it could be invasive" (see appendix L), was highlighted a lot during the questionnaire process as well as making an appearance in this interview, to reduce the invasiveness perhaps in a future design users can completely have control over the notification system enabling a less invasive way of alerting users. Mirroring the positive comments of what a previous participant had said above another participant quoted "The stats page is really informative" (see appendix L). This provided critical analysis to prove the importance of the stats analysis page for the user.

From the initial questionnaire and interviews it is important to acknowledge that the app must not be overwhelming in terms of features and promote an easy user-friendly interface. For example, not enabling overcrowded features on any pages. Contradictory to popular belief, another suggestion made by users was to ensure that the overall design wasn't too minimalistic and delivered the necessary requirements.

5.3.2 Low Fidelity 2

The second low fidelity followed a simple route of progression due to the elaborately detailed previous low fidelity in figure 3.1-3.5 (see appendix M). This low fidelity includes a clear preview of the dark mode display setting and an upgraded colour scheme, bringing the buttons, style, and aesthetic to life (figure 4.1, 4.2, 4.3 see appendix M). This low fidelity was created with the same software, using Canva (Canva website) a draft was quickly obtained and proved a compelling design. This made the perfect base for the high fidelity; this can be considered the initial crucial step before developing the end product.

The tools on Canva (Canva website) significantly contributed towards bringing the design to life. Creating the second low fidelity helped in gaining an understanding of what users may aesthetically appreciate. Following the master colour scheme from previous designs, blue was heavily incorporated into the design (figure 4.2).

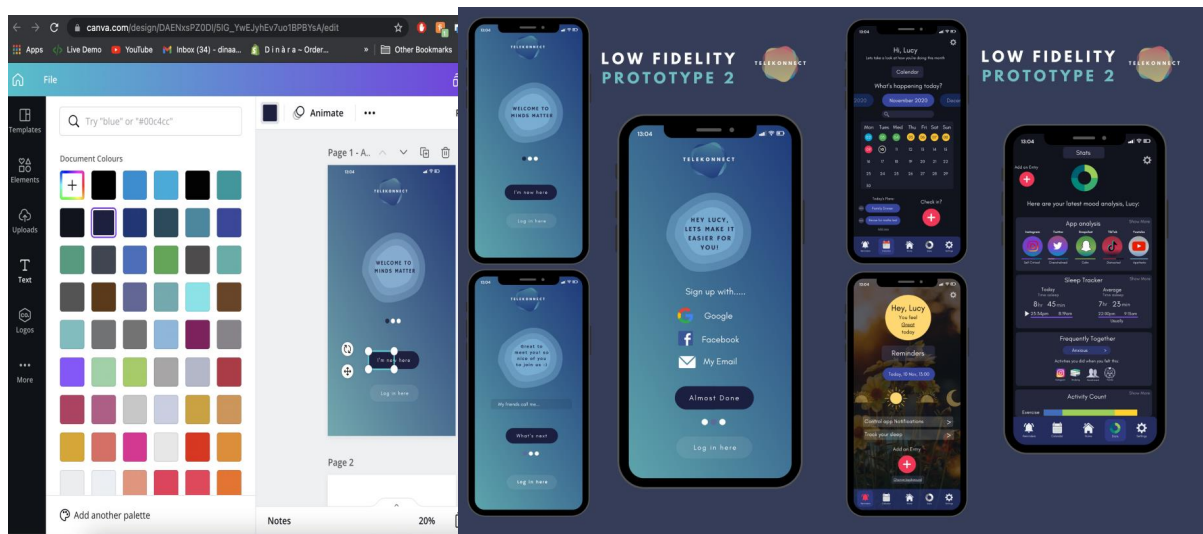


Figure 4.1, 4.2, 4.3 shows Low fidelity prototype 2 (see appendix M)

5.4 High Fidelity Prototype

Figma (Figma) was the application that was used to implement the high-fidelity prototype, the aid of the second low fidelity and focus group responses permitted the process of making the high fidelity promptly. The design of the high fidelity began with creating the onboarding and login page which remained the same throughout all the prototypes. To accomplish creating a compelling product, many tutorials for Figma were studied. This was conducted to learn how to be better equipped when using the website. Maintaining the simplicity of the interface the theme rendered a similar style from the previous low fidelity, containing a mixture of blue coloured accents reflecting from the logo. The main feature about the signing up process was to allow the user to login with their google/Facebook account so that it is easier for them. Logging into google/Facebook also gives them the choice of where they can back up their data. The next part of the design focused on creating the entries, calendar and reminders page.

Considering that the calendar page that hadn't significantly changed across all prototypes, it was completed first. The next step was to implement one of the major changes of changing the navigation dock at the bottom of the page this was done by inserting a home page whilst replacing the previous entries. Although the entries page was not completely removed from the app, it was turned into a subpage presented as a widget on the homepage. The milestones that were left to complete included, organising the home, settings, and statistics page overlays. The main issue was how interactive the prototype could be and if there was enough time to showcase all the features without taking out or replacing them. Originally the homepage was not supposed to have widgets, it was included as an inspiration from normal smartphone widget layouts and how natural it feels for the user. This feature was quickly backed up by questionnaires and interviews that were conducted post Low Fidel.

This part of the section will undergo a thorough analysis of the high fidelity presented through screenshots.

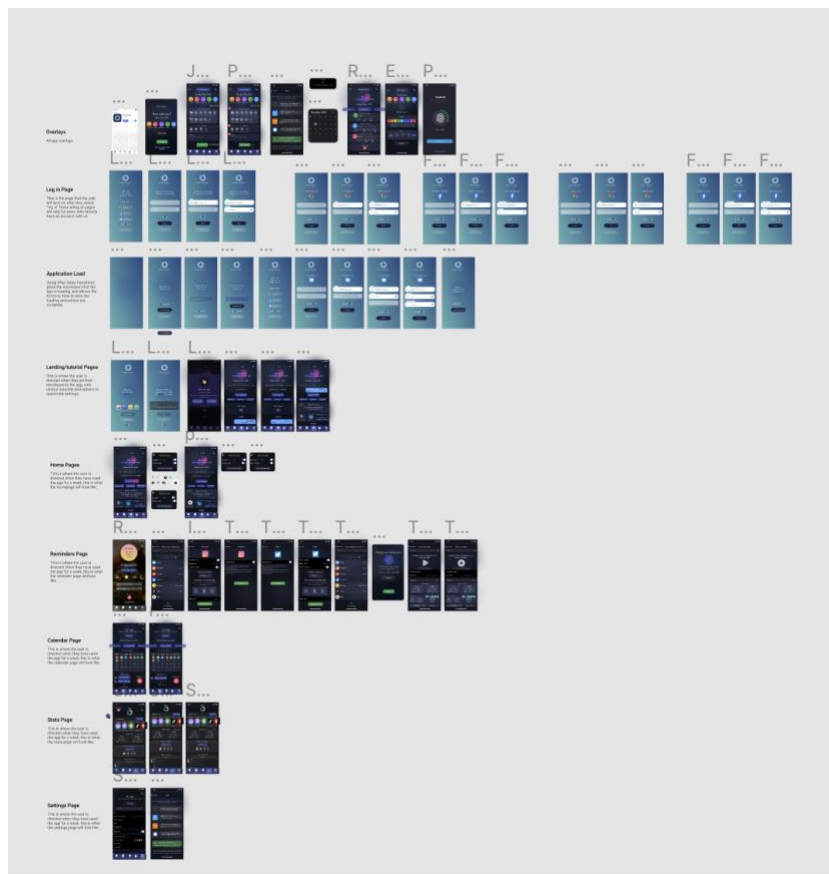


Figure 5.1 Shows overall screenshot of high-fidelity prototype (see appendix N)

The screenshot above depicts the full set of design layers produced using figma and developed for the high-fidelity application. Each section row of screens is organised into the app's major pages that the user will view in the final version. Keeping everything organised helped in saving time while updating the pages.

Beginning with the screenshot of the boarding page, visitors are greeted with an informative loading box that serves as a guide to a high-quality user experience. If the app is subsequently launched in the app store, this screen on the left will be removed; the screen was solely built to provide assistance to users when previewing the app on Figma (see appendix N for url). The second screen (on the right, figure 5.2) promotes a tranquil appearance with an mp4 "puddle" effect beneath the logo. During the design process this component encouraged a peaceful and attractive appearance. Blue, as Kaya and Epps discovered in previous studies, has a huge impact on mood, increasing nature's soothing characteristics (Kaya, N. and Epps 2004). Following earlier wireframes and fidelities, the logo remains consistent throughout all future and new designs; this was motivated by user interviews conducted in low fidelity, where users found the logo to be rather appealing (see appendix L).

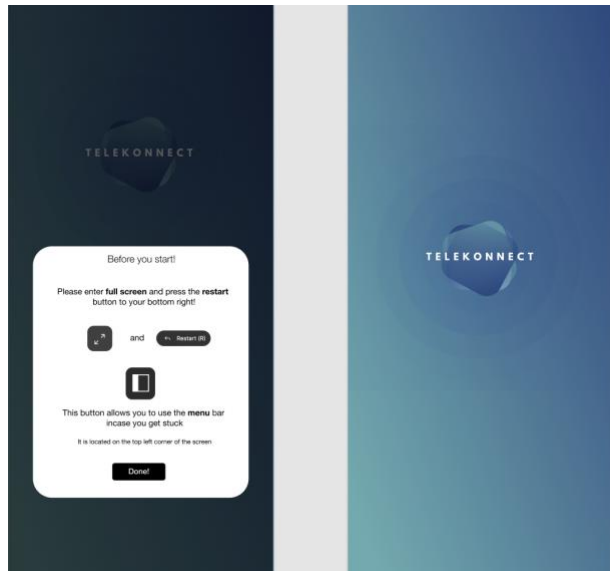


Figure 5.2 Shows the boarding pages for high-fidelity prototype (see appendix N)

The following screen is anticipated when the user taps on the above page or waits for at least 600ms (Figure 5.3 see appendix N). The user is then presented with the following sequence of pages. From this the user may choose one of two buttons: "I'm new here" or "log in here." If the user selects "I'm new here," they are directed to the third page (figure 5.3 end right screen), where they must provide their name to continue. The terminology remains inviting and user-friendly, with the goal of improving the user experience. After entering their name, the user can go to the next stage of the sign-up procedure by clicking the "what's next" button. The row of ellipses displays the remaining stages left until the user completes onboarding, acting as an anti-anxiety agent during the signup process. This feature is commonly used in various sign-up processes, which helps the user retain familiarity.

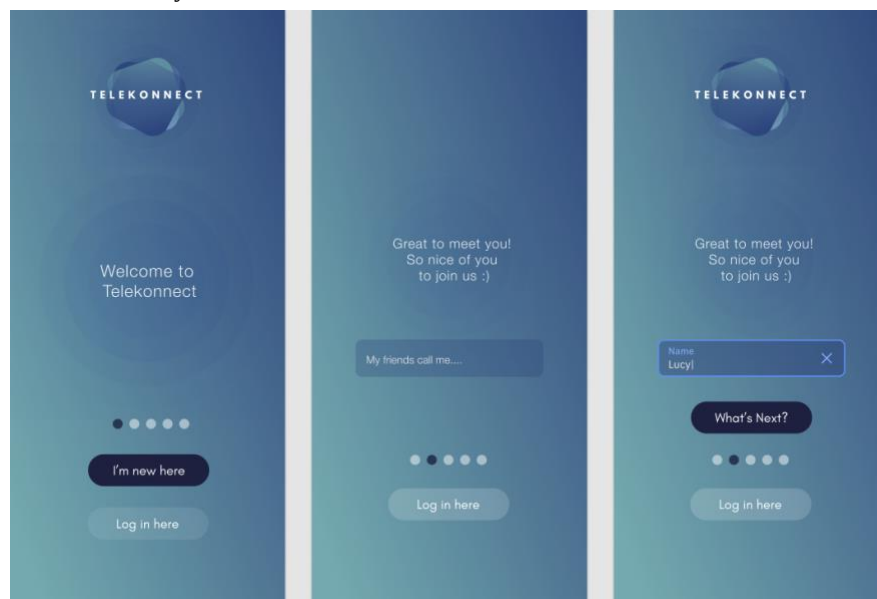


Figure 5.3 displays the boarding pages for the high-fidelity prototype (see appendix N)

The user then has the option of signing up with their Google, Facebook or email account. This function was encouraged by users during the low fidelity evaluation (see appendix L). Thus, it was implemented in the final stage providing the user with more than one option to sign up/log in. Depending on which option the user selects the following sequences pages will be shown.

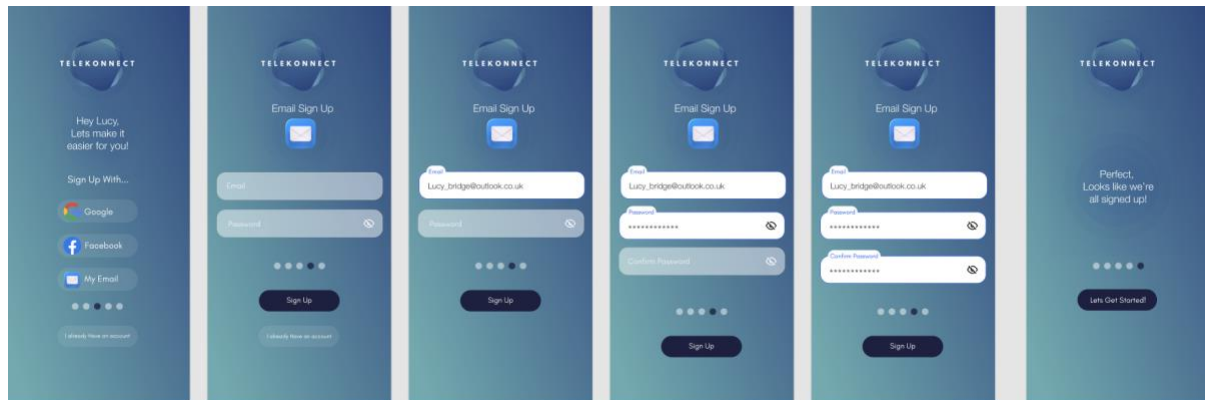


Figure 5.4 Shows the sign-up pages for the email option high-fidelity prototype (see appendix N)

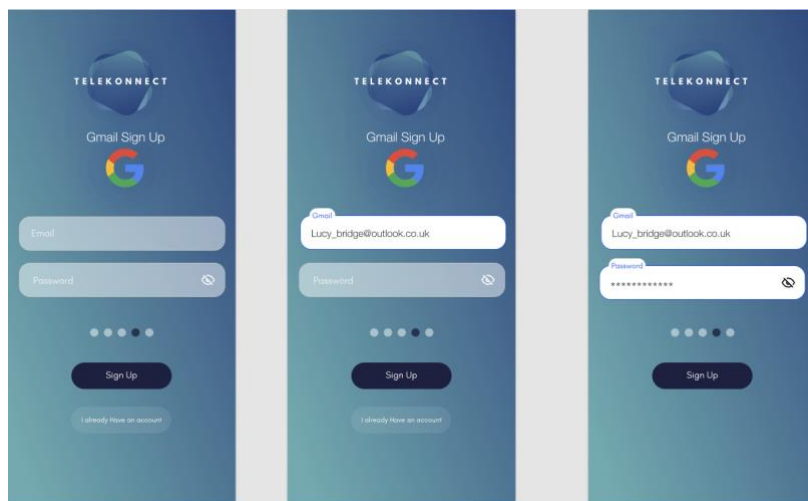


Figure 5.5 Shows the sign-up pages for the Google option high-fidelity prototype (see appendix N)

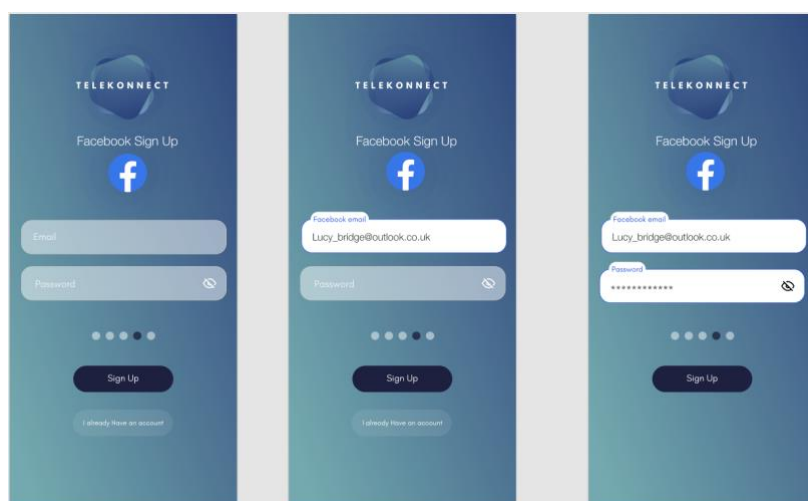


Figure 5.6 Shows the sign-up pages for the Facebook option high-fidelity prototype (see appendix N)

Similarly, the user is presented with these pages when they select the “I already have an account” or “log in” option.

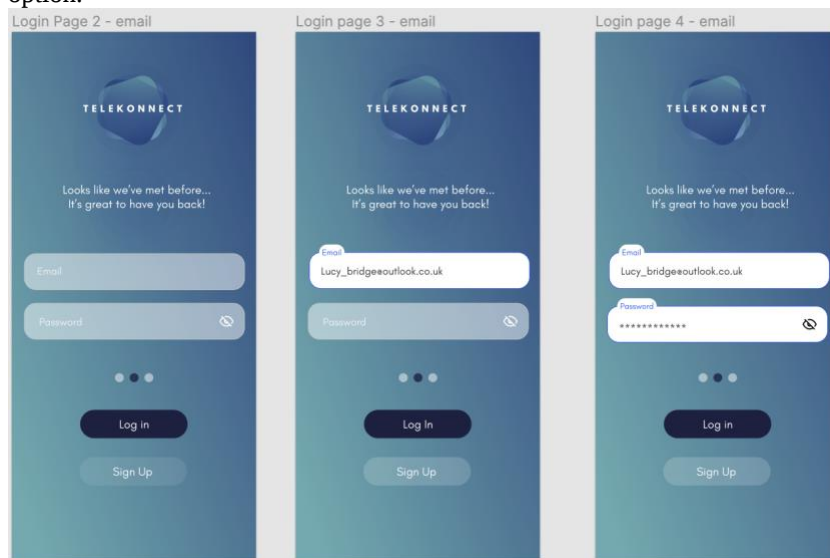


Figure 5.7 Shows the Log in pages for the email option high-fidelity prototype (see appendix N)

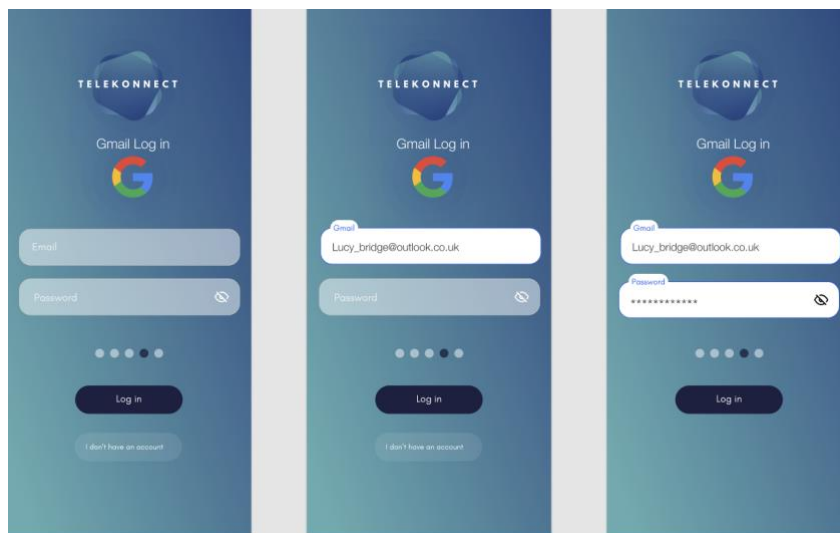


Figure 5.8 Shows the Log in pages for the Google option high-fidelity prototype (see appendix N)

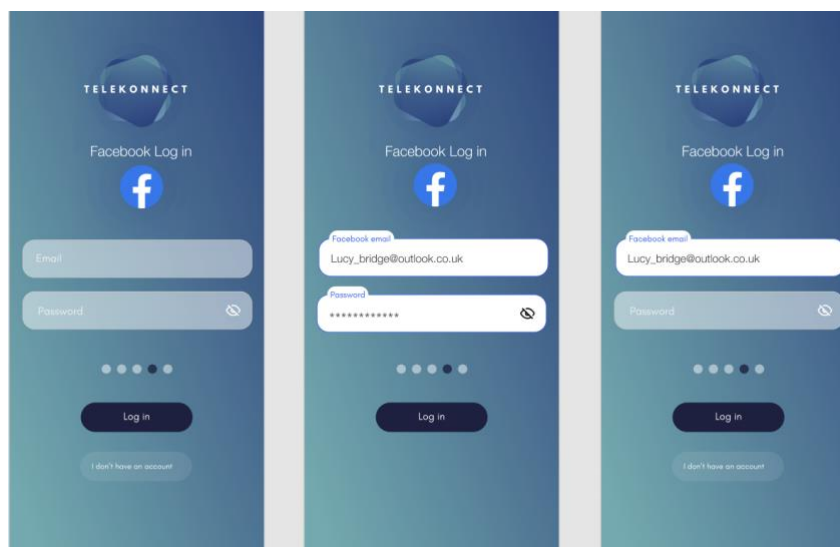


Figure 5.9 Shows the Log in pages for the Facebook option high-fidelity prototype (see appendix N)

After completing the onboarding process, users are given the option of customising their theme. As illustrated in Figure 5.10, users are presented with four colour options to choose from, as well as a dark and light mode. Dark and light mode focuses on the display setting of the user interface, allowing the user to adapt their screens in line with the environment they are in. Offering this option satisfies the user criterion of enabling user control. After the user selects their preferred theme, they are then directed to the reminders option. Users have the option of predetermining the settings before using the app, as shown by an example of what the reminders will look like. This example reduces the user's concern in determining how the alerts appear and increases decision time when selecting whether or not to implement the notifications (as shown in figure 5.10 right screen).

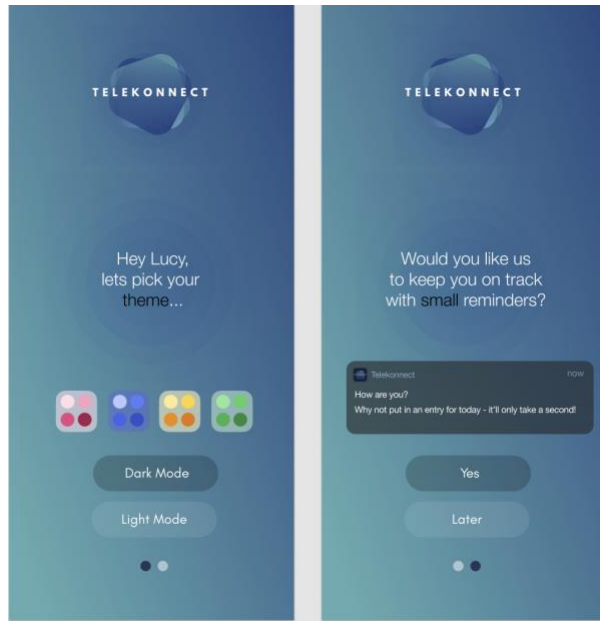


Figure 5.10 Shows the customisation options during onboarding high-fidelity prototype (see appendix N)

Below illustrates the tutorial pages that the user is introduced to after they complete the onboarding/logging in process. Due of the user's familiarity with emoticons, a waving hand emoji was chosen to greet the user on the app's tutorial page (figure 5.11, appendix N). The use of blue message boxes contributes to this familiarity by following the pattern of how users would typically receive text messages, allowing for a welcoming atmosphere. A set of 4 tutorial pages were implemented to educate the user how to use the app. A minimal choice was implemented to maintain a minimal guidance and not overwhelm the user.

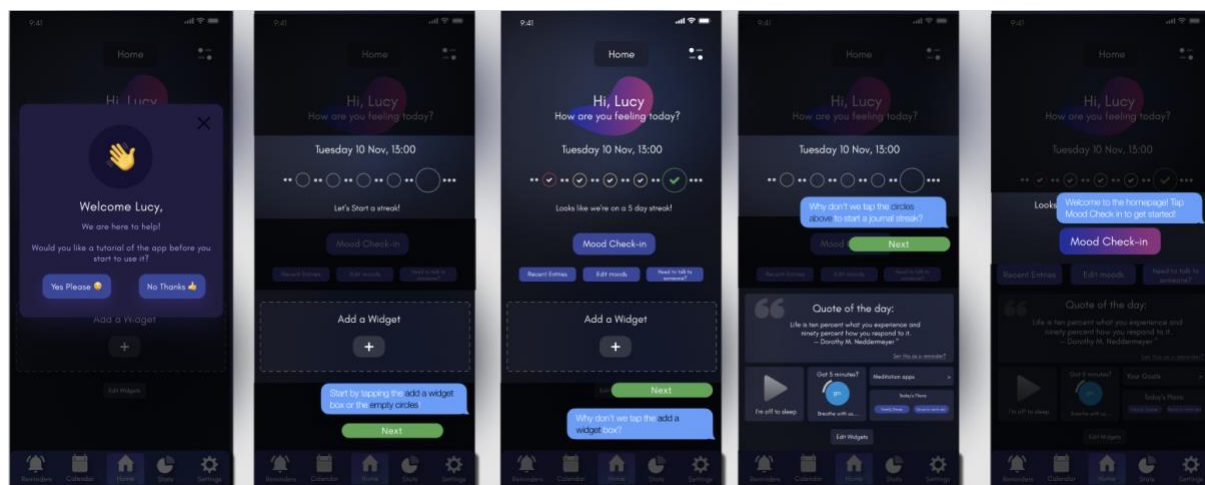


Figure 5.11 Shows the tutorial for high-fidelity prototype (see appendix N)

After completing the app's tour, the user will have full access to the app. Depending on the subscription plan chosen by the user, the app will thereafter provide access to the assigned functionalities. This choice can be modified at a later time on the settings page. To begin, below is an example of what the homepage might look like if the user had been using the app for a week (figure 5.12).

The user can find numerous useful features on the home page. Despite the fact that the design remains generally similar to the previous iterations, the homepage was one of the only pages that was not expected from the low fidelity prototypes. The user is firstly greeted at the start of the screen with a simple inquiry about how they are feeling, prompting the user to write a journal entry, and encouraging a pleasant approach that instils a good mindset in the user as soon as they launch the app (first screen of figure 5.12). This page also includes the same dock bar placement at the bottom as the previous prototypes, preserving the familiarity of smart phone home screen layouts. It also contains the date and time, which reminds the user without requiring them to leave the app, illustrating the user's need for ease and efficiency.

The user is then presented with 5 circles representing all of the days for which they have filled out an entry; this basic ellipses-like design informs the user of how their week is progressing. The user is then supplied with four options from which they may choose to check their mood, recent entries, edit their moods, or needing to talk to someone. The "need to talk to someone" button is placed on the homepage to provide for easy access for the user in the event of an emergency, figure 5.13 shows an expanded version of these choices. Finally, there are widgets, which allow the user to choose from a variety of various components that display conveniently accessible accessories within the app.

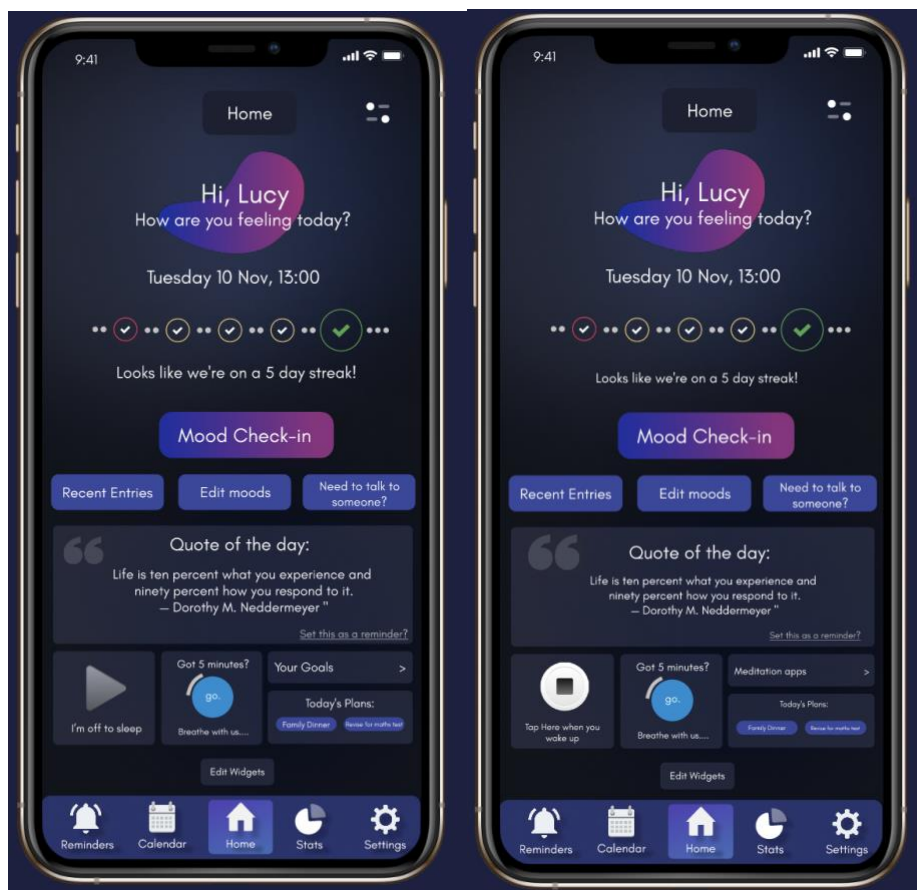


Figure 5.12 Shows the homepage for high-fidelity prototype (see appendix N)

As initially mentioned, the screen images below show all of the overlays/pages that the four major buttons on the homepage send the visitor to. The mood check in overlay completes the basic aim of capturing a brief diary entry of how the user is feeling with their chosen mood range (first screen of figure 5.13). The recent entries page presents the most recent entries submitted by the user in the form of months (second screen of figure 5.13). The "edit moods" button takes users to a website where they may customise the appearance of their emojis in relation to their sentiments (third screen of figure 5.13). Finally, the Help page is requested only when the user need emergency assistance to speak with a medical healthcare expert; this page loads a number of sources to aid the user (last screen on right of figure 5.13).



Figure 5.13 Shows the 4 main homepage buttons (mood check in, recent entries, edit moods, talk to someone) for high-fidelity prototype (see appendix N)

When the user clicks the "reminders" icon on the dock bar, the following set of screenshots appear. This page's design has remained consistent throughout all iterations. The page's goal is to allow the user to customise their notification reminders and sleep monitoring preferences. The reminders page has a similar style to the homepage in that it provides the current date and time via text and sun symbols, as well as welcome phrases. As seen in Figure 5.14, the user may also alter the backdrop of the page to whatever they choose, giving them power over personalization while still creating a new journal entry.



Figure 5.14 Shows for reminders page high-fidelity prototype (see appendix N)

When the user selects the “control app notifications” button they are greeted with the following sequence of pages. Here the user can edit the reminders for specific apps that they are tracking. Below are examples of the apps Instagram and Twitter (figure 5.15). As displayed, the user can choose to allow reminders or select preferences for the frequency of the set reminders.

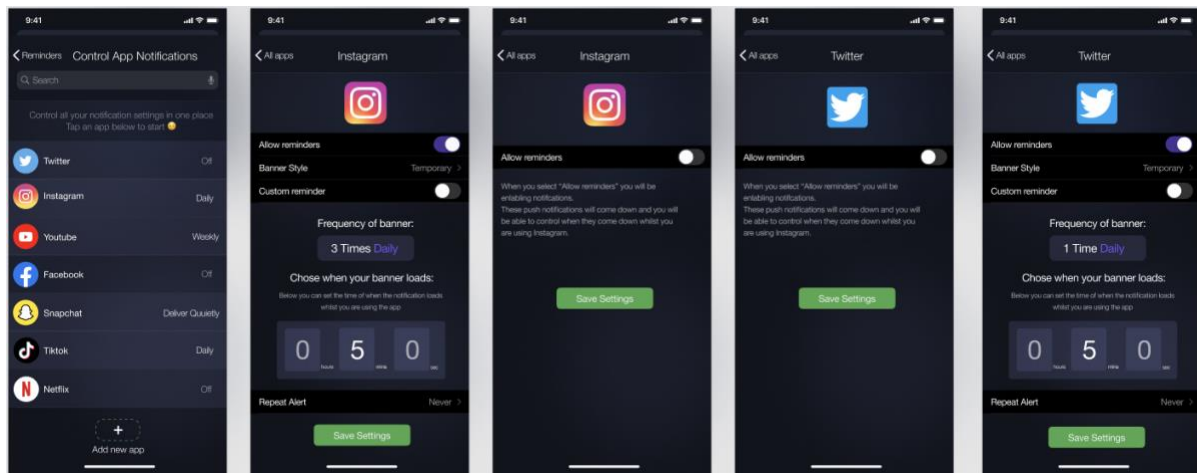


Figure 5.15 Shows for reminders page high-fidelity prototype (see appendix N)

Similarly, the reminders page is designed to be user-friendly. The task of this page mirrors the recent entries page but in calendar form. The calendar page fulfils the user's demand of giving a monthly insight into moods by allowing the user to establish their own schedule through "Today's plans," see prior entries, and check in their mood (figure 5.16).

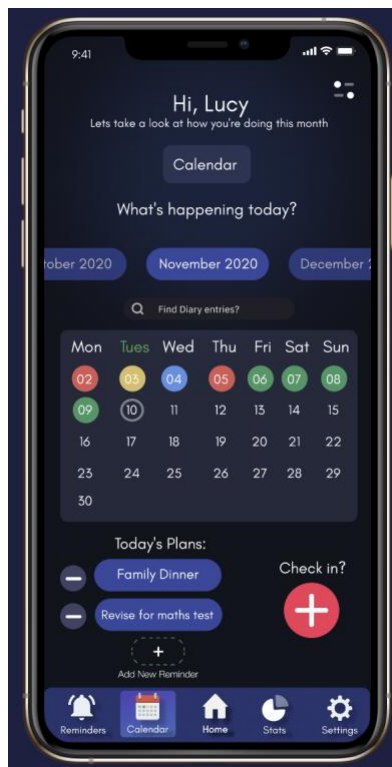


Figure 5.16 Shows calendar page high-fidelity prototype (see appendix N)

Moving on, the statistics page provides all the user's data analysis. Users may analyse their observations using several widgets, such as App analysis, which shows the user how each app makes them feel over the course of the week. When the user clicks "show more," more information is displayed. Next, the sleep monitoring widget displays data for the previous week, average, day, and month (right screen of figure 5.17). Lastly, the Frequently Together, analyses the user's behaviours in connection to the most recent mood input, allowing the user to pick a range of different moods with the arrow and analyse the activities that are most closely connected with that selected mood.



Figure 5.17 Shows stats page high-fidelity prototype (see appendix N)

Below displays the settings page, involving a straight forward hosting all the preferences where the user can modify at any time. Examples include the help page, which was previously described in (figure 5.13), the back-up and restore option, weekly reports, goals, achievements, Dark mode, touch Id pass code (displayed in figure 5.18) and many more. The example below of the touch ID/passcode preference will lead the user to the second screen displayed in figure 5.18, where they may set up a pin or utilise touch ID to secure the app. As a result, the data protection criterion is met.



Figure 5.18 Shows the settings page high-fidelity prototype (see appendix N)

5.6 Evaluation of High Fidelity

Ultimately, the high-fidelity prototype adequately satisfies the users need for a simple interface. This section of the study will be focused on evaluating the high-fidelity design as well as the challenges that were encountered when developing it.

The task was overall uncomplicated due to the sufficiency of resources from the previous low fidelity designs. Creating such detailed designs from the beginning drastically decreased time consumption, allowing more time to be used for subsequent testing later. As a result, the necessity of organisation and timeliness is emphasised. This issue was likewise accomplished by utilising the knowledge gathered from the user requirements list. Each reason was fulfilled through the design of the high fidelity after establishing a comprehensive list of these needs. As a result, a better knowledge of how the user will implement each of the criteria was justified and disclosed.

Although many milestones were reached on time, there were several complications associated with establishing the high fidelity, one being the additional effort involved when learning tutorials on Figma (Figma) to develop an engaging end-user experience. Maintaining time in this area became difficult due to a lack of familiarity with a software that I had never used previously. This time could have been improved if I had chosen a software in which I was more proficient.

Other complications included how the “edit moods” page would look, as there were no previous templates or designs from the initial wire frames and low fidelity. Thus, new designs and page overlays had to be created on the spot. Upon editing the theme, it seemed imperative to allow the user to have some form of control over it, as a result an extra step before signing up was inserted where the user could choose their own theme. Although they seemed like a creative the difficulty and issues with creating different modes and colour schemes for each page came with that. The primary modifications made throughout the design process were in the app's navigation area, with the aesthetics of the page following subsequently. Users consistently expressed gratitude for the services implemented, indicating that they were more concerned with the interactivity of the high fidelity.

Given that the majority of the population owns a smartphone, there is sufficient evidence that many people will benefit from utilising an easily accessible application. Especially given the easy user interface that was implemented. However, when carrying out this method, there encountered the issue of oversimplification of the user's mental demands and to be mindful of the extra need for resources. As a result, a Help page was created, despite the fact that it was not an original demand mentioned in the user requirements or addressed in the user questionnaires. Nonetheless, it is critical to be comprehensive when developing a list of requirements that may be impacted by a large population's digital lifestyle.

The application successfully promotes practicality and based on the features and requirements that were met. I believe that the end result exhibited a sustainable design that can be used for future implementation.

Chapter 6

Testing and Evaluation

This part of the report will be focusing on the testing and evaluation of the application.

6.1 System Testing

An essential component to any research study includes effective system and user testing. System testing encompasses a wide range of tasks, including functional testing (testing from system behavioural descriptions) and performance testing (reaction time and resource consumption), both involve evaluating the whole system according to its requirements.

After completing the high fidelity, it was time to test the functions of each button and facility on Figma (see appendix N for URL) to ensure the app works to its full potential. To provide rigorous validation of buttons and functionalities, a system testing table was created. Throughout, behavioural descriptions were employed. This comprehensive system evaluation is depicted in the table below (Table 24 see appendix O). The table's seven columns represent various aspects of the system being tested: the page being tested, the purpose of the page, how the page can be accessed, the button/function being tested, whether or not the testing was successful, potential improvements to the page/functions that could be later implemented, and, finally, functions for outside of the app that could also be implemented in the near future. Each page and overlay has also been numbered for easy future reference.

System Testing							
	Condition/ Page	Purpose of page	Accessed via:	Testing button with functional description	Successful ?	Improveme nt	Functions for outside of app implementatio n in near future.
1	Before you start screen	This is the initial page that the user sees after installing the app and loading it.	Loading the app	1 Button Done button -> when clicked it leads user to App load screen.	Yes	N/A	N/A
2	App Load screen	Loading screen between the “before you start” and boarding page.	Clicking Done button on the “Before you start screen”	Tap anywhere to direct to the next page Function: Ripple effect	Yes	N/A	N/A
3	On boarding page 1	Welcoming the user	When user taps anywhere on loading screen	2 buttons: I’m new Here ->leads user to sign up on boarding page Log in Here -> Leads user to Main Login page Function: Ripple effect	Yes all.	N/A	N/A
4	Onboarding page 2 - Sign up	Page for user to fill in their name	When user clicks “I’m new here” on the first onboarding page	2 buttons: “My friends call me” button - > leads user to onboarding page 3 Log in here -> leads user Main to login page Function: Ripple effect	Yes all.	N/A	Not related to outside of app but, when app is implemented, it will allow user to type in their own name.

5	On boarding page 3	Page for user to fill in their name	After user selects "insert name" box.	2 buttons: What's Next -> leads user to Main boarding page Log in here -> leads user Main to login page Function: Ripple effect	Yes all.	N/A	N/A
6	Main boarding page	Page offering sign up options	Loads after user selects "what's next" on the previous onboarding page.	4 buttons: Google -> Leads user to Google sign up page Facebook-> Leads user to Facebook Sign up page My email-> Leads user to email sign up page "I already have an account"-> leads user to Main log in page Function: Ripple effect	No, Google and Facebook missing sign up pages. Everything else yes.	Implement google and Facebook sign up/login pages	N/A
7	Email sign up page 1	The page where users can Sign up using their email	When user selects "My Email" button	3 Buttons: Email box - > loads predetermined email and sends user to next page Password box -> load error box Sign up - > load error box "I already have an account"-> leads user to Main log in page Function: Ripple effect	Yes all.	N/A	N/A
8	Error Box (Overlay)	To notify the user to fill in correct details.	All log in and sign-up pages	1 Button: Close button -> closes overlay	Yes	Depending on error show appropriate text.	N/A
9	Email sign up page 2	The page where users can Sign up using their email	After user selects/inserts email box	2 Buttons: Password box -> load next page Sign up - > load error box	Yes all	N/A	N/A
10	Email sign up page 3	The page where users can Sign up using their email	After user enters/clicks a password box	2 Buttons: Confirm passwords box -> load next page Sign up - > load error box	Yes all	N/A	N/A
11	Email sign up page 4	The page where users can Sign up using their email	After user clicks/confirm the password	1 button: Sign up - > load last onboarding page	Yes	N/A	N/A
12	Main Login with page	Prompted after "I already have an account" or "Log in here"	After user selects "I already have an account"	4 buttons: Google -> Loads user to google log in page	Yes all	N/A	N/A

			or “log in here” button located on first on boarding page	Facebook -> loads user to Facebook log in page My email-> Loads user to email log in page “I don’t have an account” -> loads user to main sign up page Function: Ripple effect			
13	Email log in page 1	The page where users can Log in using their Email account.	After user clicks Email log in button	3 Buttons: Email box – > loads predetermined email and sends user to next page Passwor box -> load error box Log in - > load error box	Yes all	N/A	N/A
14	Email log in page 2	The page where users can Log in using their Email account.	After user selects/inserts email box	2 Buttons: Password box -> load next page Log in - > load error box	Yes all	N/A	N/A
15	Email log in page 3	The page where users can Log in using their Email account.	After user enters/clicks a password box	1 button: Log in - > load last onboarding page	Yes	N/A	N/A
16	Google log in page 1	The page where users can Log in using their Google account.	After user clicks Google Log in button	4 Buttons: Gmail box – > loads predetermined email and sends user to next page Password box -> load error box Log in - > load error box “I don’t have an account” -> loads user to main sign up page Function: Ripple effect	Yes all	N/A	N/A
17	Last onboarding page	Indication page that user has completed all onboarding and sign up	After user has completed any sign up/log in process	1 button: “Let’s get started” -> Loads custom theme page Function: Ripple effect	Yes	N/A	N/A
18	Custom theme page	Where the user can select their preferences for their colour theme	Accessed after user selects “Let’s get started” button on last onboarding page	6 buttons: Pink colour theme -> Load next page Blue colour theme -> Load next page Yellow colour theme -> Load next page	Yes all	N/A	N/A

				Green colour theme -> Load next page Dark Mode -> load next page Light mode -> Load next page Function: Ripple effect			
19	Notifications turn on page	Page for users to select their preference before formally loading the app	Accessed after user select any option on the custom theme page	2 buttons: Yes -> Load next page Later -> Load next page Function: Ripple effect	Yes all	N/A	Load devices notification settings
20	Tutorial page 1	Guide for users on how to use the app/homepage functions.	Accessed after user selects yes/later option on the notifications turn on page at the last stage of onboarding	2 buttons: Yes Please -> Load next page No thanks -> Load Homepage 1	Yes all	N/A	N/A
21	Tutorial page 2	Guide for users on how to use the homepage functions.	Accessed after the user selects "yes please" on the first tutorial page	3 buttons: Add widget -> Load next page Empty circles -> Load next page Next -> Load Homepage 1	Yes all	N/A	N/A
22	Tutorial page 3 – add widget	Guide for users on how to use the app/homepage functions.	Accessed via: tutorial page 2 – "add widget" or "next"	2 buttons: Empty circles -> Loads next page Next -> Empty circles tutorial page (4) Functional widget	Yes all	N/A	N/A
23	Tutorial page 4 – empty circles	Guide for users on how to use the app/homepage functions.	Accessed via: tutorial page 2 – clicking empty circles or "next"	2 buttons: Add widget -> Loads add widget tutorial page (4) Next -> Loads Homepage	Yes all	N/A	N/A
24	Homepage 1	Homepage of app	Accessed via dock bar.	11 buttons: Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Mood check in -> Loads mood check in overlay Recent entries -> loads recent entries page	Yes all	N/A	N/A

				Edit moods -> Loads edit moods page Need to talk to someone -> Loads help page Play button widget -> load homepage 2 Today's plans -> Loads calendar page Dock bar buttons (4 buttons load different menu pages)			
25	Home page 2	Homepage of app Accessed via dock bar.		11 buttons: Settings button located top right -> loads quick access overlay located top right -> load quick access overlay Mood check in -> Load mood check in overlay Recent entries -> load recent entries page Edit moods -> Load edit moods page Need to talk to someone -> Load help page Play button widget -> load homepage 2 Today's plans -> Load calendar page Dock bar buttons (4 buttons load different menu pages)	Yes	N/A	N/A
26	Quick access overlay	Providing the user with quick access to settings.	Can be accessed on every page	4 buttons: Sounds toggle -> allows user to turn sounds on/off Dark mode toggle -> allows user to alternate between light and dark mode Close button -> closes overlay -> closes overlay -> closes overlay Lock and close app -> closes overlay	Yes	Implement actual pin lock on app	
27	Mood check in overlay	Where user can submit a mood entry	Can be accessed on all menu pages	10 buttons: Date-> loads calendar overlay Confused -> loads confused emoji overlay Energetic -> selects energetic emoji	Yes	Implement edit moods button	N/A

				self-critical - > loads self-critical emoji Calm - > loads calm emoji Anxious- > loads anxious emoji Cancel - > closes overlay Make it a journal entry instead - > Loads journal entries overlay Close button -> closes overlay			
28	Calendar overlay	Where user can select different dates when inserting a journal entry	Can be accessed via mood check in overlay or journal entries page	1 button: Selecting current date -> closes overlay	Yes	N/A	N/A
29	Journal entries page	Allowing the user to make a more detailed journal entry	Accessed via user selecting "make it a journal entry"	14 buttons: Date-> loads calendar overlay Confused -> loads confused emoji overlay Energetic -> selects energetic emoji self-critical - > loads self-critical emoji Calm - > loads calm emoji Anxious- > loads anxious emoji Done -> closes all overlays More parameters -> Loads journal entries – more parameters page Back button -> returns user to previous page -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	N/A	N/A
30	Journal entries page – more parameter	Allowing the user to make a more detailed journal entry	Accessed via user selecting "More parameters"	14 buttons: Date-> loads calendar overlay Confused -> loads confused emoji overlay Energetic -> selects energetic emoji self-critical - > loads self-critical emoji Calm - > loads calm emoji Anxious- > loads anxious emoji Done -> closes all overlays	Yes	N/A	N/A

				Back button -> returns user to previous page -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)			
31	Recent entries page	Where user can view most recent entries.	Accessed via homepage button only.	3 buttons: Add entry – > loads mood check in Back button -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay	Yes	Should be accessed via stats analysis page too. Implement scrolling function	N/A
32	Edit moods page	Where user can edit their mood emojis/theme	Accessed via homepage button only.	2 buttons: Back button -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay	Yes	Should be accessible via mood check in overlay. Implement mood buttons. Let the user create at least one emoji.	N/A
33	Reminders Page	Where the user can modify app notification settings, track sleep, and personalise page background	Accessed via dock bar.	8 buttons: Control app notifications -> Loads control app notifications page Track your sleep -> loads track your sleep overlay Add entry -> loads mood check in overlay Change your background -> loads change your background overlay Dock bar buttons (4 buttons load different menu pages) Delay effect -> changing of suns indicating change of time	Yes	N/A	N/A
34	Reminders Page sun change	Where the user can modify app notification settings, track sleep, and	Accessed via dock bar.	8 buttons: Control app notifications -> Loads control app notifications page	Yes	N/A	N/A

		personalise page background		Track your sleep -> loads track your sleep overlay Add entry -> loads mood check in overlay Change your background -> loads change your background overlay Dock bar buttons (4 buttons load different menu pages) Delay effect -> changing of suns indicating change of time			
35	Control app notifications page	Where user can modify notifications for selected apps	Accessed via Reminders page	3 buttons: Twitter -> loads twitter toggle off page Instagram -> loads Instagram toggle on page Reminders -> Loads reminders page	Yes	N/A	N/A
36	Instagram page Toggle on	Where user can adjust Instagram app notifications	Accessed on control app notifications page when user selects "Instagram" app	3 buttons: Allow reminders -> loads toggle off Instagram page Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	Yes	N/A	N/A
37	Toggle off Instagram page	Where user can adjust Instagram app notifications	Accessed via toggling of/on button on Instagram page	3 buttons: Allow reminders -> loads Instagram page toggle on Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	No, allow reminders button needs to be implemented. Yes to everything else.	Fix error and lead user to view changes that they have made, implement allow reminders button to change back	N/A
38	Twitter page Toggle off	Where user can adjust Twitter app notifications	Accessed on control app notifications page when user selects "Twitter" app	3 buttons: Allow reminders-> loads toggle off Twitter page Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	Yes	N/A	N/A
39	Toggle off twitter page	Where user can adjust Twitter app notifications	Accessed via toggling of/on button on Twitter page	3 buttons: Allow reminders - > loads twitter toggle on page Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	Error – when "allow reminder" toggle is clicked, loads wrong page (loads Instagram	Fix error	N/A

					toggle off instead) Yes to everything else		
40	Saved control app notifications page	Showing user that they changed the settings of Twitter/Instagram.	Accessed via: Twitter toggle on page	3 buttons: Twitter -> loads twitter toggle on page Instagram -> loads Instagram toggle off page Reminders -> loads reminders page	Error, user should be able to click twitter button. Instagram button should show updated change that user has made Yes to everything else.	Implement other apps with save function like Instagram and twitter.	N/A
41	Change your background overlay	Allows user to change the background of the reminders page.	Accessed via select "change your background button" on reminders page	2 buttons: Save -> closes overlay Close button -> closes overlay	Yes	N/A	N/A
42	Calendar page 1	User can preview all their entries in the form of a calendar as well as input a daily schedule. User can also check in with their mood.	Accessed via dock bar.	7 buttons: Remove button for family dinner -> Loads calendar page 2 Check in -> loads mood check in entry overlay Settings button located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	Implement a better way to record schedule that isn't so manual	N/A
43	Calendar page 2	User can preview all their entries in the form of a calendar as well as input a daily schedule. User can also check in with their mood.	Accessed via dock bar.	6 buttons: Check in -> loads mood check in entry overlay Settings button located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	Implement add button to bring back previous page.	N/A
44	Stats analysis page 1	Page summarises all data that has	Accessed via dock bar.	7 buttons:	Yes	N/A	N/A

		been collected by user input which is presented through a variety of widgets.		Settings button located top right -> loads quick access overlay Add an entry? -> loads mood check in overlay Sleep tracker button – Loads sleep tracking page with play button Dock bar buttons (4 buttons load different menu pages) Scroll function			
45	Stats analysis page 2	Page summarises all data that has been collected by user input which is presented through a variety of widgets.	Accessed via scrolling up on page	7 buttons: Settings button located top right -> loads quick access overlay Add an entry? -> loads mood check in overlay Sleep tracker button – Loads sleep tracking page with play button Dock bar buttons (4 buttons load different menu pages) Scroll function	Yes	N/A	N/A
46	Track your sleep page	Providing user with analysis on their sleeping trends	Accessed when user selects sleep tracking widget on stats analysis page/ when user selects stop button on track your sleep toggle stop page.	Play button -> loads “track your sleep page “ with stop button	Yes	N/A	N/A
47	Track your sleep page toggle stop	Providing user with analysis on their sleeping trends	Accessed when user selects play button.	Stop button -> loads “track your sleep page” with play button	Yes	N/A	N/A
48	Settings page	Providing a list of preferences users can modify.	Accessed via dock bar.	7 buttons: Help -> Loads help page Touch ID/Passcode - > loads touch Id pass code page	Yes	Implement dark mode toggle	N/A

				Settings button located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)			
49	Touch ID Page	Shows user how registering their touch ID would work	Accessed via – settings page only	Use passcode -> loads settings page	Yes	Implement Back button -> returning user to previous page	N/A
50	Help page	Where user can access help if they require it.	Accessed on: homepage/settings page	Settings -> loads settings page (home page help page has different page where user can select back to homepage button instead of this one) External links ->	Yes	N/A	Load call line/website on device when user taps phone number.

Table 24 shows figures collected from an in-depth system testing evaluation (see appendix O).

6.1.1 Improvements

It is obvious from the many tests conducted above that significant changes were required. Before proceeding, it was necessary to confirm that each inaccuracy was fixed. When feasible, the main improvements proposed will be implemented. Creating this table was an essential step in ensuring the full capability of the application.

Inserting Google and Facebook sign up/log in pages was one of the most significant adjustments that needed to be made (number 6 of table 24, appendix O). Given that they were previously created, connecting the pages to the early onboarding steps proved an easy task. While doing so, there was an additional enhancement that came up which could be applied throughout the onboarding process: the error boxes on the log in/sign up page should display the proper error (number 8 of table 24, see appendix O), such as incorrect email, password, or insufficient information completed in the relevant forms.

Moving on to the app's actual pages, the primary flaws discovered included the toggle choices on the Instagram option of the control applications notification page. This sub-page on the reminders page highlighted the basic mistake of the "enable reminders" button not working (37-40 of table 24, see appendix O). This must be done in order for the user to be able to visit the correct page. Similarly, the same error was displayed on the Twitter page, as well as when the user was sent back to the main control app notifications page. Showing that this area of the app design required further attention to detail and error reduction.

It was critical to eliminate mistakes in order for the user to utilise the app effectively. Looking at the potential enhancements, there are a few key ones that will be altered later to guarantee a compelling user interface experience. Allowing the user to exit the app and sign in using Facebook/Google to validate their account (6 of table 24, see appendix O) is one of them. This is an important element of the onboarding process since it ensures the user that they can use their account to the fullest. Another significant enhancement is the mood check in overlay, which allows the user to check in on their mood throughout the day (27 of table 24, see appendix O). The primary enhancement on this page was to make the "edit moods" button functional so that the user could better understand how to pick their own mood preferences. Followed by the edit moods page, it revealed a very low interaction layout in which the user could not reach the full capability of the app (32 of table 24, see appendix O), indicating another prospective enhancement for the app. Similarly, there are a few buttons on the control app notifications page that could be greatly enhanced to improve the user experience. Finally, the Touch ID button page (accessible via the settings page) could be improved by allowing the user to preview what their pin/security options would look like. The next part of testing focused on the users point of view.

6.2 User Testing and evaluation

6.2.1 Testing Table

To further ensure that the high fidelity was ready for implementation, a test was incorporated involving three participants. The users tested the same variables from the table above (Table 24 see appendix O). The test was carried out through a user heuristic evaluation. According to Wei-siong Tan, Heuristic evaluation “provides valuable insight of usability problems in both ‘finished-ready-to-launch-interface’” (Tan, W.S., Liu, D. and Bishu, R., 2009.). Heuristic analysis is mostly dependent on the experience and knowledge of human factors engineers, who analyse the website using a set of heuristics. Table 25 shows figures collected from an in-depth user testing evaluation (see list of tables/appendix O). The table had been compiled into all 3 of the suggestions that participants had pointed out. Out of the 62 pages and overlays, below contains only the main components of improvements that the users had pointed out.

User Testing						
	Condition/ Page	Purpose of page	Accessed via:	Testing button with functional description	Successful?	User suggestions
8	Error Box (Overlay)	To notify the user to fill in correct details.	All log in and sign-up pages	1 Button: Close button -> closes overlay	Yes	Users suggest showing different signs for error. System testing improvement was not met.
12	Google sign up page 1	The page where users can Sign up using their Google account	After user clicks Google Sign up button	3 Buttons: Gmail box -> loads predetermined email and sends user to next page Password box -> load error box Sign up -> load error box “I already have an account”-> leads user to Main log in page Function: Ripple effect	Yes all	Fix email error, use g-mail account. Improvements implemented after first error.
13	Google sign up page 2	The page where users can Sign up using their Google account	After user selects/inserts email box	2 Buttons: Password box -> load next page Sign up -> load error box	Yes	Improvements implemented after first error.
14	Google sign up page 3	The page where users can Sign up using their Google account	After user enters/clicks a password box	1 button: Sign up -> load last onboarding page	Yes	Improvements implemented after first error.
15	Facebook sign up page 1	The page where users can Sign up using their Facebook account	After user clicks Facebook Sign up button	3 Buttons: Facebook email box -> loads predetermined email and sends user to next page Password box -> load error box	Yes all	Improvements implemented after first error.

				Sign up - > load error box "I already have an account"-> leads user to Main log in page Function: Ripple effect		
16	Facebook sign up page 2	The page where users can Sign up using their Facebook account	After user selects/inserts email box	2 Buttons: Password box -> load next page Sign up - > load error box Function: Ripple effect	Yes all	Improvements implemented after first error.
17	Facebook sign up page 3	The page where users can Sign up using their Facebook account	After user enters/clicks a password box	1 button: Sign up - > load last onboarding page	Yes	Improvements implemented after first error.
36	Homepage 1	Homepage of app	Accessed via dock bar.	11 buttons: Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Mood check in -> Loads mood check in overlay Recent entries -> loads recent entries page Edit moods -> Loads edit moods page Need to talk to someone -> Loads help page Play button widget -> load homepage 2 Today's plans -> Loads calendar page Dock bar buttons (4 buttons load different menu pages)	Yes all	Edit widgets button should be functional
38	Quick access overlay	Providing the user with quick access to settings.	Can be accessed on every page	4 buttons: Sounds toggle -> allows user to turn sounds on/off Dark mode toggle -> allows user to alternate between light and dark mode Close button -> closes overlay -> closes overlay -> closes overlay Lock and close app -> closes overlay	Yes	Users suggest involving an actual locking mechanism to visualise how it work.

39	Mood check in overlay	Where user can submit a mood entry	Can be accessed on all menu pages	10 buttons: Date-> loads calendar overlay Confused -> loads confused emoji overlay Energetic -> selects energetic emoji self-critical - > loads self-critical emoji Calm - > loads calm emoji Anxious- > loads anxious emoji Cancel - > closes overlay Make it a journal entry instead - > Loads journal entries overlay Close button -> closes overlay	Yes	Users found that the “edit moods” button did not work, this should be improved.
40	Calendar overlay	Where user can select different dates when inserting a journal entry	Can be accessed via mood check in overlay or journal entries page	1 button: Selecting current date -> closes overlay	Yes	Allow user to select more than one date
41	Journal entries page	Allowing the user to make a more detailed journal entry	Accessed via user selecting “make it a journal entry”	14 buttons: Date-> loads calendar overlay Confused -> loads confused emoji overlay Energetic -> selects energetic emoji self-critical - > loads self-critical emoji Calm - > loads calm emoji Anxious- > loads anxious emoji Done -> closes all overlays More parameters -> Loads journal entries – more parameters page Back button -> returns user to previous page -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	Implement more functional buttons where the user can choose different activities
42	Journal entries page – more parameter	Allowing the user to make a more detailed journal entry	Accessed via user selecting “More parameters”	14 buttons: Date-> loads calendar overlay Confused -> loads confused emoji overlay Energetic -> selects energetic emoji	Yes	Allow the user to actually remove parameters

				self-critical - > loads self-critical emoji Calm - > loads calm emoji Anxious- > loads anxious emoji Done -> closes all overlays Back button -> returns user to previous page -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)		
44	Edit moods page	Where user can edit their mood emojis/theme	Accessed via homepage button only.	2 buttons: Back button -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay	Yes	Users proposed that this website be made more interactive by allowing at least one pick of emoji creations.
45	Reminders Page	Where the user can modify app notification settings, track sleep, and personalise page background	Accessed via dock bar.	8 buttons: Control app notifications -> Loads control app notifications page Track your sleep -> loads track your sleep overlay Add entry -> loads mood check in overlay Change your background -> loads change your background overlay Dock bar buttons (4 buttons load different menu pages) Delay effect -> changing of suns indicating change of time	Yes	Users pointed out that the aesthetics of page could be improved to match the rest of the app. Introduce background picture slide show
47	Control app notifications page	Where user can modify notifications for selected apps	Accessed via Reminders page	3 buttons: Twitter -> loads twitter toggle off page Instagram -> loads Instagram toggle on page Reminders -> Loads reminders page	Yes	Implement other apps with save function like Instagram and twitter.
48	Instagram page Toggle on	Where user can adjust Instagram app notifications	Accessed on control app notifications page when user selects	3 buttons: Allow reminders -> loads toggle off Instagram page Save settings -> loads control all app notifications page	Yes	Implement the other buttons

			"Insstagram" app	All apps -> loads control all app notifications page		
50	Twitter page Toggle off	Where user can adjust Twitter app notifications	Accessed on control app notifications page when user selects "Twitter" app	3 buttons: Allow reminders-> loads toggle off Twitter page Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	Yes	Implement the other buttons
56	Stats analysis page 1	Page summarises all data that has been collected by user input which is presented through a variety of widgets.	Accessed via dock bar.	7 buttons: Settings button located top right -> loads quick access overlay Add an entry? -> loads mood check in overlay Sleep tracker button – Loads sleep tracking page with play button Dock bar buttons (4 buttons load different menu pages) Scroll function	Yes	Implement more widgets that the user can interact with.
58	Track your sleep page	Providing user with analysis on their sleeping trends	Accessed when user selects sleep tracking widget on stats analysis page/ when user selects stop button on track your sleep toggle stop page.	Play button -> loads "track your sleep page" with stop button	Yes	Implement more functions and button to increase interactivity.
60	Settings page	Providing a list of preferences users can modify.	Accessed via dock bar.	7 buttons: Help -> Loads help page Touch ID/Passcode - > loads touch Id pass code page Settings button located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	Users suggested making this page more functionable by allowing them to change the colour theme

By completing this table, any extra errors found in the high fidelity prototype of the app was narrowed down. It is essential to note that most of the improvements from the original table were satisfied; however, some were left out due to time constraints and will be added later. Users proposed a total of 15 improvements. The primary enhancements proposed included the addition of a "edit widgets" button to the app's homepage (36 of table 25, see appendix O), they wanted to see how they might choose future widgets for the app. The next enhancement was for the quick access overlay (38 of table 25, see appendix O), where users recommended incorporating a real locking mechanism to see how the app would appear when it is locked and how the user can log in/log out. Another significant analysis that users pointed out was that the calendar overlay did not allow the user to select real dates, this could be implemented for future iterations.

Users noted that on the journal entries page there should be an increase in the functions implemented, as users wanted to be able to pick more than one activity. Users also expressed a desire to be able to alter the app's settings and observe what happens when one is deleted (41 and 41 of table 25, see appendix O). On the edit moods page, it was suggested that the page be made more interactive by allowing users to create at least one mood to see how it functions (44 of table 25, see appendix O). AA participant made an excellent idea when they recommended that the calendar page include a possible picture slide show in the back/gif live photographs that the user may alter and pick (45 of table 25, see appendix O). The last improvements focused on making key app pages more engaging, such as the settings, data analysis and track your sleep subpage.

Although the user testing component of system testing allowed people to suggest different changes, it limited the amount of positive input that could be obtained from the high fidelity. This prompted the suggestion to conduct a focus group to see what consumers appreciated about the app and what could be improved.

6.2.2 Focus Group Testing

A controlled experiment was carried out in order to complete the heuristic evaluation. A two-tailed hypothesis was tested, stating, "There will be a substantial change in the user's ability to navigate through the app" (see appendix P). The dependent variable was how the ppts reacted when using the app, and the independent variable was the design of the high fidelity being tested. A repeated measures design was used for the experimental design. A repeated measures design is a type of experimental design in which the same individuals participate in each condition of the independent variable. Three different volunteers were recruited from various age groups to attempt to make it more representative of the target demographic aged 10-52. For the best analysis, the research was videotaped; due to protection and privacy, the recordings remain classified. As with prior research, there was highly constraints in terms of reaching people at the same time, especially given the present restrictions, which is why opportunity sampling was chosen for this participant design. The study used standardised instructions to ensure that the experiment was as controlled as possible. This also guaranteed that any extraneous variables were removed. Some of the standardised instructions included placing the ppts in a silently closed room that stayed undisturbed for the duration of the testing.

According to the findings, 97 percent of the participants considered the app to be informative and beneficial for not just emotions but also for carrying out everyday activities and life in general (see appendix P). The older ppts agreed that the primary implementation might be larger buttons and typography. The 10-year-old ppt appreciated the calendar page's simplicity as well as the advanced features, such as the ability to set daily reminders. Possible enhancements include introducing notifications that are more basic and require less effort, as well as push notification direct response, that can allow the user to react directly to the banner rather having to launch the application altogether. Overall, whilst carrying out this study confidence in the app was refreshed in how successful it could be in helping people with day-to-day life.

To conclude, due to the findings found here there will not be a further implementation of the application. Presented by the time constraints it will prove to be too difficult/time consuming to further implement the app, with the given improvements and perhaps this can be possible completed in future work.

Chapter 7

Conclusion

The primary goal of this study was to offer persuasive evidence that social media can induce a significant deterioration in users' mental health during the isolation period of a worldwide pandemic. In response, a comprehensive literature analysis was conducted, along with evidentiary research demonstrating the dramatic consequences in the usage of social media and designing an application to assist in solving the problem. Through conducting this evaluation, the initial research aims of understanding the consequences and benefits of social media were fulfilled. However, the secondary research did not meet the objective of gaining significant statistical evidence to determine how users feel or any real establishment between mental health disorders and social media usage. To accomplish this objective effectively, primary research was conducted.

Through a series of questionnaires and interviews, the overall findings of the studies proved the hypothesis of; “a negative response from users regarding social media the questionnaire” and determining the objective that Instagram and Tik Tok could be responsible for causing a negative change in the mental health of users. The studies also contributed to a better understanding of why and what users utilise social media for during a pandemic, as well as what negative thoughts/anxiety-like behaviour is elicited in users through the usage of social media. Two more preliminary study objectives were satisfied as a result of this.

When performing the research, it was discovered that there was a motive in offering a solution to assist the consumer through developing an app. The creation of a viable strategy was addressed through creating Telekconnect, a mood journaling tool. The application focuses on creating a safe environment for users to monitor their time on social media and other activities in order to project data analysis into the probable reasons of deterioration in mental health. The app was successfully tested by participants and satisfied the majority of the criteria on the user requirements list, making it a successful, engaging, and viable app design.

The study provided in this paper provides an important foundation for understanding current social media habits during a global pandemic, as well as the role it plays in cognitive control and mental wellness. To better understand existing experiences and perceptions of social media as a foundation for future study, mental health presents thematic approach to creating and assessing self-tracking technologies for a healthier social media use. The aim was to make a product that could monitor people's moods, and, in the process, it was able to deliver so much more.

7.1 Future Work

While social media is inextricably linked, the research uncovered in this study provides basic insights into users' mental well-being. The target of assisting users was achieved by the deployment of a mood journaling app. As mentioned previously due to time constraints this application was not further implemented in this paper; however, with adequate time and funding, this app could be implemented in future work and put to a larger use to benefit the majority of social media/app users.

7.2 Limitations

The key limitation that was present when conducting this research project was time. Time constraints placed a huge demand for the adequacy in work rate production. Although there was extensive experience in primary data collection there proved to be an overflow of data, proposing that if there was a reduction of primary research time could have been allocated for better use in the final implementation of the application. Another restriction was the formulation of research goals and objectives. The research aims and objectives were excessively broad, resulting in generic statistics, as evidenced by the initial questionnaire. The level of emphasis of the investigation could be increased if the research aims and objectives were narrowed. Lastly, as mentioned previously the lack of previous studies showcasing a relationship between the use of social media and mental health disorders lead to the foundation of research depending on the primary data collected. If further research was conducted perhaps this could have improved the general quality of the end product.

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Appendices

Appendix A: Initial Questionnaire table data

1	Age	Results
A	Below 17	713 (16%)
B	18-25	3601 (82%)
C	26-35	220 (5%)
D	Over 40	30 (0.6%)

Table 1 showing figures for the ages of participants in initial questionnaire

2	Gender	Results
A	Male	713 (17%)
B	Female	3601(83%)

Table 2 showing figures for the genders of participants in initial questionnaire

3	Where are you from?	Results
A	London	1173 (42%)
B	USA (322 ppts)	322 (1%)
C	Somewhere in the UK (1116 ppts)	1116 (40%)
D	Canada (175 ppts)	175 (0.6%)

Table 3 showing figures for the destinations of participants in initial questionnaire

4	Do you own a smart phone	Results 4306
A	No	94 (2%)
B	Yes	1745 (40%)
C	Yes, and I use most of my apps on my smart phone	2351 (55%)
D	Yes, but I use most of my apps on another device e.g., tablet/iPad.	116 (3%)

Table 4 showing figures of users who own a smart phone in initial questionnaire

5	Do you use your phone everyday	Results
A	Yes	2267 (98%)
B	No	39 (2%)

Table 5 showing figures of users who use their phone everyday in initial questionnaire

6	What social media apps do you use?	Results
A	No	94 (2%)
B	Yes	1745 (42%)
C	Yes and I use most of my apps on my smart phone	2351(56%)
D	Yes but I use most of my apps on another device e.g., tablet/ipage	116

Table 6 showing figures of what social media apps users use initial questionnaire

7	Do you care about how social media apps affect your mood?	Results (4571)
A	Yes	2452 (54%)
B	No	984 (21%)
C	Yes and I want to find out more about how it influences my mood	1135 (25%)

Table 7 showing figures of users who care about how social media apps affect their mood in initial questionnaire

8	Have you ever used a mood tracking app before?	Results
A	Yes	438 (15%)
B	No	2538 (85 %)

Table 8 showing figures of users who have previously used mood tracking apps in initial questionnaire

11	Would you be interested in an app that has journaling qualities to help track your mood?	Results
A	Yes	1062 (78%)
B	No	298 (22%)

Table 9 showing figures of users who would be interested in an app that has journaling qualities to help track mood in initial questionnaire

12	Would you be willing to use this app every day to help?	Results
A	Yes	1381 (84%)
B	No	270 (16%)

Table 10 showing figures of users who would be willing to use this app everyday to help in initial questionnaire

16	Would you be interested in a daily, weekly, monthly and yearly analysis of your mood in relation to activities and app usage?	Results
A	Yes	1129 (94%)
B	No	71 (6%)

Table 11 showing figures of users who would be interested in a daily, weekly, monthly, and yearly analysis of your mood in relation to activities and app usage for initial questionnaire

	Question – continuous variable	Raw data	Mean, median, mode	Standard deviations
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10	On a scale of 1-5 how important is keeping a mood journal and writing down how you feel to you? 1 being least and 5 being most.	1 – 30 2 - 38 3 - 92 4 - 94 5 - 59	3.36, 59, 4	83.54
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Table 12 showing figures for Likert scale for initial questionnaire

Appendix B: Initial Questionnaire raw data

Initial Questionnaire Transcription

Date: 16th of November 2020

Total number of participants: 4564

Female: 4160

Male: 199

Age group: 17-40

Countries: UK, UAE, CANADA, KUWAIT, Denmark etc

Aim: To gather some further information on how much time users spend on social apps, how users currently keep track of their time whilst on the social apps, how users feel about the contribution of fake news to their emotional health.

Hypothesis: There will be a significant difference between participants who negatively associate the apps Instagram and Tik Tok with their emotions in contrast to participants who do.

Question 1: How old are you?

A Below 17 (713 ppts)

B 18-25 (3601 ppts)

C 26-35 (220 ppts)

D 40+ (30 ppts)

Question 2: Are you Male or Female?

Male (199 ppts)

Female (4160 ppts)

Question 3: Where are you from?

A London (1173 ppts)

B USA (322 ppts)

C Somewhere in the UK (1116 ppts)

D Canada (175 ppts)

Other: "wales, Cambridge"

Question 4: Do you own a smartphone?

A No (94 ppts)

B Yes (1745 ppts)

C Yes and I use most of my apps on my smart phone (2351 ppts)

D Yes but I use most of my apps on another device e.g., tablet/ipage (116 ppts)

Question 5: Do you use your phone everyday?

A Yes (2267 ppts)

B No (39 ppts)

Question 6: What social media apps do you use?

A Just one app (like Instagram) (229 ppts)

B Instagram and others (Twitter, Whatsapp, Snapchat) (3572 ppts)

C Other social media apps (not listed above) (385 ppts)

Question 7: Do you care about how social media apps affect your mood?

- A Yes (2452 ppts)
- B No (984 ppts)
- C Yes and I want to find out more about how it influences my mood (1135 ppts)

Question 8: Have you ever used a mood tracking app before? If yes what is it called?

- A Yes(438 ppts)
- B No (2538 ppts)

Open answers: “Dailyo, calm, youper, moodpath, mind doc, clue, flo, headspace, sanvello, Samsung health”

Question 9: Name something you wish a mental health/mood tracking app could do?

Open question responses all from different participants:

- “help me deal with certain triggers”
- “lock my phone for a set amount of time, to get a break from social media”
- “tell me how to lift my mood and what would help through knowledge”
- “tell me what kind of things to do, to be able to get back into a good mood”
- “cute reminders”
- “it has only 5 moods and I want to make my own one” – implemented via customisable moods.
- “little therapist chat thing”- helpline page
- “Instructions on how to calm down anxiety as it comes” – through the breathing exercises
- “not just the generic advice everyone normally gives. Impactful ones”
- “give intricate details into how to work around the emotions that’s been displayed on app”
- “Recommend activities or anything to help in the situation for e.g. anxiety”
- “help me find ways to maybe uplift my mood on lower days”
- “the toxicity in my life”
- “have a mode where you can block social media notifications and set helpful reminders”
- “take you out the state of anxiousness”
- “understand my mood without me saying anything”
- “meditation guides”
- “tell me what I need to do to minimise the chances of social media affecting my mood” – due to privacy and other laws this may prove to be difficult as the app is there to only provide insight and connect the dots, not offer therapy/advice
- “stress level”
- “ask directed questions”
- “Easy self care things that are not cringe or overbearing”
- “id love it if it plays me music catered to me if I’m in a bad mood” – suggestion widget for homepage
- “tell me if it affects my sleep?” – sleep tracker implemented
- “Motivation app” – implemented through quotes
- “recognise patterns in my mood and link its with my period cycle” – implemented via physical health option
- “keep me motivated to use the app”
- “a place where I could journal and put my thoughts down”
- “connect to others, see how others score with tracking mood and app, signposting”
- “give tips on exercises or time out for meditation so can have breaks in between scrolling”
- “Reassurance reminders or a section for mediation like calming tactics”
- “actually believe I’ll be better and that there is hope somewhere for a better life”
- “voice noes for motivation”
- “tips for when I’m feeling down”
- “goal setting”
- “show me how to change my mood for the better”
- “give me meal ideas for mood boosting foods or give me ideas of simple mindfulness”
- “tell me the difference in what things I’ve done on a day I felt good and day I felt bad”
- “make me happy”
- “tell me to get off my phone”
- “Tips to stop stressing and how to stop procrastinating since social media does that to me :/”
- “Overall mood for the week and suggestions on how to improve for the next week” – mood analysis implemented

Question 10: on a scale of 1-5 how important is keeping a mood journal and writing down how you feel to you?
1 being least and 5 being most.

1 – 30
2 - 38
3 - 92
4 - 94
5 - 59

Scale	Scale squared	Results
1	1	30
2	4	38
3	9	92
4	16	94
5	25	59

Mean: 3.36

Mean squared: $(30*1)+(38*2)+(92*9)+(94*16)+(59*25) = 3913/313 = 12.5$

SD: 83.54

Question 11: Would you be interested in an app that has journaling qualities to help track your mood?

A Yes (1062 ppts)
B No (298 ppts)

Question 12: Would you be willing to use this app every day to help?

A Yes (1381 ppts)
B No (270 ppts)

Question 13: How would you like to log your moods when using apps?

Open question responses all from different participants:

“I think a simple logging in method, like not too long winded where it becomes tiresome to do everyday”

“I like your example”

“yes, would be easier to remember to log your mood”

“options of moods”

“it’s a good idea I just wonder if people would get annoyed by the notification pop up”

“daily reminders at the end of the day”

“sounds good, creates awareness of scrolling and how we feel and the journey thru our useage”

“yes this would be so helpful to see the link between increased about of times on apps + mood”

“Have an option whether they would like this or not. So they can pick if they want it or not”

“like screen time on iphone”

“it’ll make me think about how I’m actually feeling at the time”

“quick short answe or using buttons (like smileys)”

“yes, but like a reminder to be like ‘walk down the stairs’ ‘ say hi to someone’ or ‘do something nice’”

“yes because it can help me keep in touch with my self??”

“not texts I would not be will it to write”

“Rating like stars or smiley faces”

“yes because it would be a good reminder that I can get off the app if its not making me happy”

“maybe like 3 multiple choice questions”

“Yes and I think a simple emoji mood scale to click how you are feeling would be cool”

“can it remind me to either get off the app or use it less if it shows a consisten reduction in mood”

“I think that would be really nice”

“it’s to be reminded that I should reduce time for selflove”

“I think mood can change quite a bit depending on what's going on”
“have a daily reminder one which you can set the time yourself”
“given a range of specific words to pick from”
“Yes and I'd say make it up to the user to decide when they get a notification”
“would be great if we can log out mood in the beginning of the day then at the end”
“It would help to regulate what makes an individual feel that way”
“voice/audio”
“Each day you have like a little note pad that lets you write the time when you write your moods and at the end of the day it shows you what you have written”
“with different types of colours reflecting each mood on what you are feeling that specific day”
“maybe an emoji”
“I find it annoying preferably once a day only”
“maybe at night otherwise it can get annoying”
“it'll allow me to be more self aware in moments of scrolling through social media
yes because it is a little reminder”
“it will encourage me to use the app to focus on mental health well being more I forget sometimes to”
“journal my thoughts and it would be really great”
“set emojis”
“writing down how you feel and someone professional gives you some advice”
“low mood but So what what comes next I think most people are aware that their moods are low
and need the next step more so than just seeing it and that's all if that makes sense”
“I wouldn't respond to it to be honest maybe like widgets very accessible from the home screen”
“By clicking on emojis or pictures to describe the mood or even being able to select words”
“Yes because it can make sure you don't forget to think about or record your mood when using the line”
“So it reminds me and so that it's quite helpful tool, I have an app right now called mine dock which used to be
called mood path and they send notifications it would motivate you to actually go log it”
“I feel like it would be annoying like a mom nagging me to stop being on my phone”
“So that it can remind me to stop for a second and think about how I am feeling or what I could do to make it
better”
“a few different questions could be asked just so the notification doesn't get boring”
“No I would prefer it to be more like randomly so it would just hit different than scheduling it to make it
happen”
“i think it would be great to have a choice to have scheduled times to log like a reminder”
“yes it's easy to lose track of time on socials so having something to break focus is great”
“Sometimes I tend to forget a lot so this is helpful”
“I think it would be good time for me to reflect I'd like some sort of questionnaire where I don't have to” “write
out too many questions but I choose options like a wanted ten scale, smiley faces, etc”
“To stop myself from binge using it whilst in a certain mood”
“To track what's affecting me”
“Yes it would make the process of tracking my mood a lot easier”
“The way you suggested seems convenient”
“It might become annoying after a bit in my opinion maybe like a noise or something else”
“Depends how frequently”
“maybe arrange from happy to sad because I don't know there's so many other moods too”
“Too lazy to go on a whole different app”
“It's a reminder to keep track of our feelings throughout the day and I think that's great”
“Yes but not like annoyingly often maybe once in the evening”
“I feel like notification should be bombarding my phone”
“Because at the time it could potentially slip my mind though it asked directly, and during usage it could help
me pick apart what exactly it was also it'd be nice even if it's a fabricated up and not a real person it'd be nice to
check up on”
“After a certain min of using the app we get to log in our current state of mind”
“deffo a good idea to see first how your mood was and then 25 mins later to see how it is again”
“yes Take Me Out of the app and encourage me to think about my own feelings and write them down for those
who find it hard to pinpoint exactly what to put down you can have a mood bar with many different emotions”
“sometimes I'm tired to be on an app but I keep scrolling on my screen:
“multiple choice questions”
“I'd probably just ignore it while I'm scrolling to be honest”
“I may feel pressure to keep up and fill it out”
“click the banner but still stay on Instagram a little screen pops up allowing us to choose options”

Open question responses all from different participants:

“Netflix”
 “pinterest”
 “spotify”
 “video streaming apps like youtube”
 “fitness apps”
 “Discord”
 “emails”
 “whatsapp”

Preliminary codes: “Tiktok” “Netflix” “youtube” “pintrest”

Question 16: Would you be interested in a daily, weekly, monthly and yearly analysis of your mood in relation to activities and app useage? If yes/no why

A Yes (1129 ppts)

B No (71 ppts)

Open question responses all from different participants:

“to see how my year went and if I was able to improve my health or not”
 “I think it would be really interesting to see how social media has affected me”
 “yes to see how I'm progressing if my mood or mental health is improving or deteriorating depending on changes I make as a result of using the app”
 “it will help self reflect, often I used apps to connect but mostly it's to procrastinate LOL”
 “motivation”
 “always nice to have an overview”
 “I thought I generally had good days until I started a tracker. pretty interesting”
 “yes. Because a lot of apps ask you to pay before using”
 “I cherish internal and external growth, mine Dan physical too. And to see myself develop overtime would be really really great. Especially for those who are easily hurt /triggered”
 “so I can analyse if I made any progress or any mental health/ mood is deteriorating”
 “it would probably help me to be more productive what was affecting my mood so much”
 “I think it would help me in making changes and organising”
 “this would again be a cool thing to reflect and see if seasons affect my moods or stress levels”
 “keeping track the progress of my life :)”
 “shows progress or decline”
 “yes because you will see the effect it has on you over a period of time which might make you change”
 “to go over how I've been mentally over the past week month and so on”
 “would give a better incentive to use apps less or more differently”
 “I want to be in more control of my well being”
 “improve my life”
 “it would be so useful to compare your mood and see how it's changing depending on what apps you use”
 “so I can see what I did the month my mood was the best and tried to implicate more of it”
 “definitely helps to see progress and gain some sort of idea on yourself”
 “to see my progress”
 “can be used to compare other weeks and see if the usage has caused the mood”
 “yes to track when I start to feel down”
 “I don't want my personal information out there”
 “yes as long as it's not like apple health personally for me that app doesn't track well”
 “this is so smart”
 “yes because it would give a good overall review”
 “I would love to see my progress overtime”
 “I think you'll have a better view if the app would really help me”
 “weekly”
 “weekly”
 “that would make me aware of what up is most toxic”
 “because then I would get an insight on how much social media consumes my life and how I can improve”
 “want to see the progression of how I've changed overtime periods”
 “to see how much social media really impacts me”
 “a lot of ups and downs a lot of growth I'd like to see and be proud of”

“show stress causes etc”
 “OMG yes”
 “would be interesting to see if there is any patterns when using certain social media applications”
 “shows how your mood is affected”
 “yes but a weekly unless it sounds intimidating a monthly one gives time for improvement”
 “weekly or monthly to see if my moods have improved to see if I've become more positive”
 “then I could pinpoint what times I was sad”
 “it would be a good way to reflect and improve”
 “to see how social media is affecting me”
 “because I think it would help me in finding out where I need to develop or fix things”
 “to track my self growth and mental health”
 “to track progress comment seeing progress increases willingness to do it more”
 “so I can make changes and are aware of what affects me and how much”
 “helps me to see if I should cut down on social media use if it negatively impacts me a lot”
 “to keep track on my improvements”
 “I think it would be good to keep track and look back at too”
 “I think this will be a good way to see if there is any trend with social media usage and mood”
 “weekly”
 “just to see the correlation overtime and how it changes in specific months like for example the difference between when I have exams/ on holiday”
 “I think it would be great to look back on and see if there's any improvements overtime etc”
 “see if my moods are getting better or if I am coping better”
 “so you compare monthly or daily and see if there is a pattern also you could do like a quick add if you are in a hurry or can't be bothered you click maybe how you are feeling”
 “it's like an overview of how things have been and how you were at the start till now”
 “keeps me in cheque of what's affecting my mood the most plus what apps I need to cut down”
 “yes to help me reflect on how I can adjust how I can use certain apps to improve my mood”
 “see which app affects me the most”
 “it's like a progress trick might be able to see where going wrong what apps bring me down”
 “I can see if I'm always sad”
 “yes yes yes especially as someone with GAD I want to know if he's getting better”

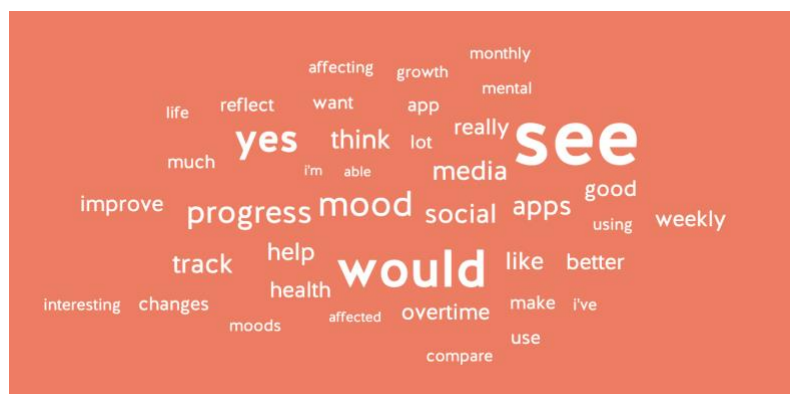
Analysis:

Preliminary codes: “interesting” “to see” “yes” “look back”

Frequency of words:

- To see - 18
- It would - 9
- Social media – 7
- Mood – 10

Word diagram:



Appendix C: Second Questionnaire raw data

Second Questionnaire Transcription:

Date: 6th of February 2021
Total number of participants: 2,547
Male: 113
Female: 2,434

Aim: To gather some further information on how much time users spend on social apps, how users currently keep track of their time whilst on the social apps, how users feel about the contribution of fake news to their emotional health, as well as gathering interview participants.

Hypothesis: There will be a significant difference between participants who negatively associate the apps Instagram and Tik Tok with their emotions in contrast to participants who do.

Question 1: Do you use tik tok or Instagram?

A Tik Tok (574 ppts)
B Instagram (1,072 ppts)
C Both (300 ppts)

Question 2: do you feel like spending time online has helped you during lockdown?
Yes (1,451 ppts)
No (970 ppts)

Tell me why

Open question responses all from different participants:

“because I have nothing to do”

“because of boredom”

“I have something to do something to entertain myself with”

“I could have been doing better things good for my mind and mental health instead of scrolling”

“well other than being on it more because of lockdown I have also decreased my hours because I get bored but also because it helped me get inspiration further in my career plans for IT”

“helps me get inspiration and trying new things out for myself to fill up my free time”

“able to catch up with my friends and family especially with apps like azumin FaceTime”

“simply feel like you reconnect with the outside world”

“it's getting draining but there's nothing else to do”

“a way to keep connected with other people so you don't feel as isolated”

“to be honest not really it's just draining everyday the same routine”

“yes I know I've learned new things but spent too much time online”

“to keep me occupied”

“it's a distraction and it feels like we're all in this together”

“developed an eating disorder through Instagram and Tik Tok ”

“a chance to really take my time and learn more about things that I have an interest in”

“keeps me occupied”

“neutral to be honest”

“too much time wasted on my phone”

“feels like other people are experiencing the same thing so you feel better I don't know?”

“I could waste hours of my day on my phone and not even notice”

“keeping myself at least busy”

“I talk to no one and it feels like I'm lonely so social media gives me so much”

“used other distraction from reality”

“distraction”

“no one talks to me at home”

“online school is not the one is coming up to my GCSE soon and I'm not sure of anything”

“it's only time I relieve my stress and kill the time”

“taken my mind off things”

“lockdown hasn't fazed me at all I'm only annoyed at the amount of roadworks”
“whilst being locked inside feel like it's as close as you can get to the outside world”
“just people pretending everything is perfect LOL. and influences trying to sell you make up when your friends and family are dying”
“helped me interact with friends made new friends I learned things and watched stuff:
“distracts me from focusing on Deen”
“I decided to use this lockdown to read books instead I felt like I was making comparisons online. and questioning my worth the weather and lack of vitamin D isn't helping either so want to make use of my time”
“allows me to connect with my friends”
“connect with people”
“going to school is so much better than being online for lessons because it's just much easier”
“I would be so bored without going online but also not good for my eyesight”
“yes I know because it helps other distraction but then it will make me feel insecure sometimes”
“allowed me to tune into bigger problems that aren't covered more politically aware”
“feel so detached from doing other things that would make me feel productive”
“connecting with people and not feeling alone”
“distracts you from life”
“take my mind off things”
“keeping in touch with friends”
“it's something I use to distract myself to cope”
“Netflix and YouTube videos have helped pass the time quicker”
“just a lot going on at home so it distracts my mind from that”
“yes I know it's helped because it keeps you distracted”
“I get to escape the real world”
“it helps knowing that we're all in this together and it's such a good way to keep in touch”
“it helps time go by quicker”
“keep seeing people that you don't really want to see but at the same time can't remove them”
“I work as a doctor so I need something else to think about”
“no because I feel like productivity level has gone down”
“Ashley it me a lot which can be good and bad but hasn't done me the best”
“it keeps me occupied”
“friends”
“staying in contact with friends”
“I just feel like I'm missing my personality the more I spend time online”
“feeling connected to people outside of my home and a break from my family”
“I spend 6 hours in front of a computer for school work and social media makes me drained”
“only real form of interaction with friends during lockdown it can get so isolating”
“it's giving me something to do LOL
“so the same as physical interaction”
“working on my business has distracted me a lot and helps me with my mental health”
“honestly to be honest I'm an introvert so lockdown is a dream and I'm always on my phone”
“I don't know it's really the same”
“I'm addicted to my devices”
“feels like it's made me less productive in a kind of **** to be honest feel like I should have either started a business or got engaged”
“it distracts us”
“physically in one place for so long can be too much being online is like a temporary escape”
“it's distracted me too much”
“serves as a dissasociation from everything going on outside”
“I'm at the point in my life where I am supposed to be getting to know new people etcbut I have hardly had any social interaction for ages now and I think it's actually so bad for young people”
“entertainment and also a lot of learning”
“I could be doing productive things or learning new things instead of scrolling on Instagram”
“helps the time go by”
“somewhat it really has brought me closer to my Iman and closer to God|
“I got to see different types of content on the Internet”
“no because I got somewhat addicted”
“never felt more insecure in my life people constantly posting about their life transformations”
“it makes me feel connected to other people”
“it can be draining and unhealthy but I've learned so much about the world and people around me”

“you start comparing lifestyles a lot more last being on Instagram”
 “I could interact with my friends and distract myself from overthinking”
 “it made me realise how much time there actually is when being productive”
 “I learned loads of new life hacks and facts”
 “it helped me because I got to text and FaceTime my friends even though we're not together”
 “kept me distracted from certain mental pressures in a way”
 “it helped me to take the time to educate myself on topics and to look at fashion things”
 “helped me get around faster”
 “it did not help me but I would say it's definitely a way to pass the time”
 “it let me have time to focus on me”
 “Tik Tok so fun to watch you connect with people through comments you learn new things however on Instagram you see people are still living life even though there's a pandemic going on but in a way it shows the world isn't over and there are better days to come and not to give up”
 “it calmed me down”
 “it depleted my mental health so bad I am not being able to see friends and family and feeling alone”
 “it lets me interact with my loved ones and laugh even though it's a hard time”
 “it's a distraction doesn't have much to do but just to post time”
 “I've always been on my phone so it's not different for me”
 “I don't use Instagram that much to distract myself instead I chat with some of my friends”
 “helped me grow”
 “allows the time to pass also makes me feel like I'm not alone in this”
 “really good for charities and go fund me links”
 “I still see media as a waste of time for most of it”
 “kills time”
 “Tik Tok keeps me sane through laughter”
 “to be honest social media gets overwhelming and I wish I was offered way more”
 “I've gotten to talk to people that helped me hold myself together”
 “it helped me order to stay in touch but overall I find I have nothing to do but be on line”
 “because it helped me stay in contact with others and also I was able to still learn many things at home”
 “glued to the screen all day and I feel so unproductive”
 “escapism”
 “made me connect with so many people that had lost contact with”
 “nothing else to do”
 “it's taken over my life LOL”
 “I was able to find time for watching videos in my study field”
 “massive destruction”
 “because time flies”
 “helps me distract from anxiety inducing thoughts I have when I'm doing nothing”
 “it gives me something to relax with on after a productive day since I can't go out with friends”
 “it's a huge destruction is taking me away from completing day to day tasks”
 “unhealthy”
 “Tik Tok reduced attention span can't focus for longer makes work unproductive”
 “it's a bit of both that's why I haven't chosen one I feel like it's made me lazy but also pushed me to be creative”
 “comedic relief and learning new things from tik T.O.K:
 “help me feel connected but also not so much”
 “I've been able to stay connected to everyone around me”
 “it's basically only way to communicate but I feel myself spending too much time online”
 “I spend so much screen time for school and work when I use my socials my eyes hurt”
 “great content like yours”
 “time pass”
 “doing research into various topics has helped me feel productive”
 “self help and self care accounts have also helped me learn a bit about myself”

Analysis:

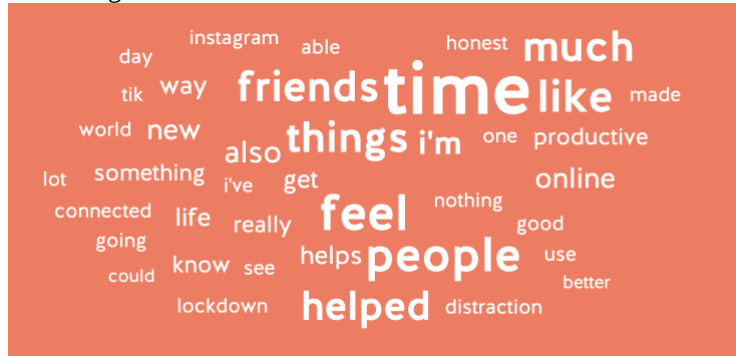
Preliminary codes: “friends” “time” “people” “it helped” “help” “productive” “honest”

Frequency of words:

- Helped – 11
- Time – 26

- People – 16
- Friends – 14
- The time – 6
- Productive – 6
- To be honest – 5
- It helped me – 5

Word diagram:



Question 3: how much time do you spend on Instagram/ Tik Tok during lockdown?

- A 1-3 hours a day (200 ppts)
- B 3-5 hours a day(1,121 ppts)
- C 5+ hours a day (223 ppts)
- D less than an hour a day (176)
- E 7+ hours a day (590)
- F I don't know I don't keep track (120 ppts)

Question 4: what app do you spend most of your time on?

Open question responses all from different participants:

"Instagram"	154
"Tik tok"	134
"twitter"	32
"Youtube"	39
"Netflix"	25
"Snapchat"	16
"Whatsapp"	7
"Pintrest"	5
"Facebook"	3
"imessage"	2
"discord"	2
"Email"	2
"Amazon prime"	2
"clubhouse"	1
"Microsoft Teams"	1
"Google Meet"	1
"Reddit"	1
"webtoont"	1
"Tumblr"	1
"CrunchyRoll"	1
"House Party"	1
"weverse"	1
E Books (Kindle)	1
"safari"	1

“it gets to the point where my eyes start hurt”
“everyone knows it's bad for your health and bad for building social skills”
“leads to being unproductive sitting in one position with backaches”
“it's very toxic Tik Tok unrealistic expectations filtered to look perfect when reality isn't perfect”
“I've noticed I end up procrastinating a lot when I could have done an assignment”
“I spent an unhealthy amount of my time on my phone because of boredom”
“it can affect your brain in the long run”
“I mainly use it to connect also for work kind of as a database of entrepreneurs or Islamic resources”
“makes me feel physically sick also seeing other people around the world having fun”
“I don't spend more than one hour a day on social media”
“too much time”
“I could spend that time being productive and doing other things”
“Instagram is not real life and I feel like comparing myself with every influencer but I shouldn't”
“I'm wasting my whole day on it”
“could be doing something more productive”
“sometimes a waste of time”
“I was so much time when I could be doing other things for example reading cooking etc”
“don't spend much time at all I just cheque and get off”
“it can affect your mental health”
“it's not a lot but it should be less because life is waiting and wasting time on socials is pointless”
“stops productivity/ promote insecurity by boosting the same kind of content everywhere”
“my day gets wasted I could be so much more productive”
“because you don't realised that time goes so fast and you did nothing other than just being on Instagram”
“my eyes are deteriorating”
“social media is a cast amongst the young generation it's used for all the wrong reasons”
“I don't keep track of time and time goes and I've basically been doing nothing looking back it feels like a waste of time he interrupts me from why should be focusing on like my friends family school and Dean”
“because I spent a lot of time using tik T.O.K and I can use that time to do many other things”
“I only spend about an hour total one Instagram everyday and ticked up comes in waves sometimes it's 5 minutes with tik T.O.K or a few hours I don't really go on everyday either”
“I may get too toxic for me sometimes like it makes me hate my real life”
“I always make sure I sign out of apps to avoid distractions”
“I tried to cut down on social media because of school work”
“I've got nothing else to do so”
“influences my thought process too much and disrupts my learning”
“I could be using the same time to be bettering myself or learning new things”
“better ways to make use of your time”
“it's about energy and I could be focusing on other things”
“leads me to procrastinating other things I have to do”
“again it wastes my time and drains me out/ procrastinate a lot!”
“I literally don't get anything done”
“you forget about your surrounding like family and friends”
“I don't think it's necessarily bad how much I spend on it but I know that people should really cut down”
“ruins you mental health if you already are going through trauma could make it worse”
“increases insecurities”
“it's hellu unproductive and makes you lazy and feel balmy but to be honest it is because of lockdown”
“it's not overly obsessive”
“it can have a big impact on someone's life”
“spending way too much time rather than studying [personally]”
“unproductive, demotivating, damaging”
“too absorbed in the online world and not enough in your own”
“yes”
“drains me out to be honest”
“I don't spend that much time on either because college keeps me preoccupied but I did used to spend like 7 hours just on Instagram but I don't know now I can't find anything to spend that much time on”
“I feel like it damages my brain and my eyesight”
“I could be doing some other things and not looking at screens at all all day”
“it can result in bad eyesight”
“losing track of time”
“honestly I like it because it keeps me occupied and away from my thoughts”

“because I could be doing something else and using my time more wisely”
 “could be more productive”
 “in the middle of both sometimes I spend too much but other times it's not a lot”
 “I've got good self control hamdulillah and I use it for inspiration”
 “don't get any work done, bad for mental health, unmotivated to do anything else”
 “I spent around an hour of which I don't think is bad but my YouTube time is also very high”
 “it is definitely not healthy for mental health, posture, eyes, fitness, in real life relationships”
 “because it also does affect my mental health I compare my life and looks too much to other people I see people live happy lives and I wish I was them but I can't do anything about it. I'm not a boring person, I'm energetic outgoing and I love to make memories and go on adventures but I don't have that many friends and the friends that I do have a home bodies sometimes I think I'm meant to live a different life, A better life. I am 21 and so far I feel like I've lived my prime doing nothing I don't think Instagram is a necessity but I do feel like it distracts me from my boredom”
 “I don't feel like I'm living my life anymore I know it's a pandemic but I don't feel very productive”
 “I just think to myself sometimes when I'm on Instagram; I could have used time differently”
 “I think 45 minutes to an hour is fine for each app it can cancel out a lot of productivity though”
 “I'm productive I go work and I do 12 hour shifts”
 “just to catch up and chat to friends”
 “could spend the time being productive instead”
 “it's just a waste of time but it's fun I can't help it”
 “get consumed by materialistic things and unrealistic expectations of how I should be”
 “because it's the reason I procrastinate the most”
 “because I feel like if I had more motivation, I would use that time more wisely instead!”
 “It takes away from our real life and time and also wasting time is wrong”
 “because I feel like I could be using this time to be more productive”
 “like I lose track of time, so that I lose the day do other things such as university work”
 “unproductive”
 “wasting of time and procrastinating from the things I should actually be doing”
 “Instagram is a facade and an unrealistic place which in turn conditions my brain in a bad way”
 “too much false expectations/ comparing everyone's highlight reel with your own mundane life”
 “I don't feel like I spend too much time on social media each day”
 “I don't know social media control my life so I set my own personal limits of when I should stop”
 “you think you are in control on the influence that social media has but you are not”
 “unrealistic ideas of life, beauty, etc becomes the norm in your brain”
 “because after a long day it's nice to unwind and look at memes and videos”
 “less screen time equals better sleep more time for spiritual growth and being more productive”
 “unproductive”
 “it's so easy to lose track of time especially during lockdown and always being at home”
 “during lockdown I recognised that I had really declined in my mental health basically really bad depression because we don't have access to the outside”
 “I'll be on my phone too much”
 “because you can use that time to spend time with family and social media can be distracting and pull you away from quality family time which also has a huge impact in your mental emotional and physical health”
 “because I could get so much more done but I procrastinate by scrolling”
 “I need to do my university essays”
 “because you missed out on what's happening in the real world”
 “unproductive”
 “it's too corruptive”
 “it occupies too much of my time and makes me less productive”
 “I keep time on my phone to a minimum out of habit”
 “I don't get as much work done”
 “you'll be unproductive”
 “could be so productive, please”
 “because it's too much and it takes up most of my time”
 “I barely spent that much time in both I spent about an hour 30 minutes on both combined”
 “I waste my time on it instead of being productive I have so many assignments”
 “spend way too much time, it's not the best for my mental health”
 “my eyes and mental motivation”
 “I have a phone addiction and I use it to cope with my anxiety disorder”
 “won't get enough time to do other things”

B User (1561 ppts)

Question 8: “social media negatively affects my mental health”

- A Strongly agree (657 ppts)
- B Yes (200 ppts)
- C No (150 ppts)
- D Strongly disagree (33 ppts)
- E Neither (167)
- F Not sure (297)

Question 9: what on Instagram or Tik Tok causes you anxiety or negative thoughts?

Open question responses all from different participants:

- “beauty standards”
- “how people portrayed the good only”
- “beauty standards and body image”
- “everything listed”
- “so many beautiful girls on Instagram that I stopped comparing myself and it causes me anxiety”
- “seeing how quickly people grow and seeing 0 progress for me”
- “insecure”
- “jealousy”
- “unrealistic beauty standards”
- “beauty standards body for sure because lockdown weight”
- “body image for sure”
- “unrealistic beauty standards”
- “my mental fortitude is made of iron I rarely use social media and I do not fish for likes”
- “the unrealistic lifestyle an just seeing everyone acting rich unsuccessful. Sometimes I wish I was asked successful as someone else or have everything that they have. is so stupid though I'm so young and in university I don't need to be rich but it's just subconscious thoughts. and lastly it makes me feel like everyone is doing something with their life except me” – the idea of missing out
- “people who only showed the good stuff beauty style”
- “fear of missing out”
- “unrealistic beauty standards:
- “Filters”
- “body image mostly”
- “body image”
- “creates a fake image”
- “Filters of unrealistic body and face”
- “fake news”
- “feel like I'm behind in life by seeing what people my age are doing”
- “beauty/ body standards come on marriage standards, missing opportunities, productivity”
- “body image”
- “fomo”
- “unrealistic beauty standards”
- “everything! It can get really exhausting just looking at the same stuff everyday, issues etc”
- “nothing”
- “constant new trends summer fun to try out but some I really am scared to try out because I do not have the talent sometimes I struggle taking pics without those philtres that basically resemble plastic surgery”
- “comparing to my life (they have great friends/ family, why don't I, I must be abnormal and weird)”
- “I think it's just general negative content some accounts provide, I have to clean my Instagram because it really affects how my day is going to be you might not think so but subconsciously it does come out like for example seeing motivational things on your feed makes you want to achieve way more”
- “seeing people beautify toxic behaviour”
- “fear of missing out and those who showed the good stuff for example holidays marriage etc”
- “people stay in stuff like their professionals in the field especially diet or fitness stuff”
- “unrealistic beauty standards”
- “not reality”
- “definitely the filtres”

“for the image, and the people only showing positives like they aren't real”
 “fomo and people who have everything perfect”
 “people just create insecurities that you never even thought about”
 “Filters, I feel like I don't look pretty without one anymore”
 “the beauty standards”
 “fake news and body image”
 “you can never be sure of what you see”
 “unrealistic standards of life”
 “South Asian bullying”
 “heaters”
 “fake news and fomo”
 “fear of missing out and beauty standards”
 “too much filters or Photoshop which makes people think that they are not beautiful enough and it makes you realise that beauty standards are not you”
 “Mostly body image a negative mental health stigmas”
 “it's all kind of fake everyone puts out their best self so it can be hard not to compare yourself”
 “People only show the good parts of their lives making my life seem boring”
 “Unrealistic beauty standards”
 “Body image/ unrealistic beauty “perfection”
 “The reimposition of western beauty standards”
 “Racism, homophobia, islamophobia, sexism UK meme page comments”
 “Body image for sure and not feeling pretty enough”
 “Untrustworthy pages, unrealistic beauty standards!”
 “Filters make the originality pf my pictures seem ugly”
 “Fear of missing out. Even though I know my timeline ain't the same as other's it still affects me”
 “News whether its true or fake, its a lot and has no limits”
 “body image and filters”
 “Fake news”
 “People who are like really pretty and then you just feel insecure”
 “The need to feel like you should be like them to fit in to society because you're “cool” enough”
 “Every girl looks the same and all the guys have high expectations of what a girl should like”
 “Beauty standards and how addicting the apps are”
 “I tend to compare myself to others so Instagram doesn't help”
 “Jealousy”
 “unrealistic beauty standards”
 “Negativity, Hate speech, harassment”
 “unrealistic beauty standards/body image”
 “the philtres are wild and once you start getting used to it seeing you forget your real face”
 “fear of missing out on the beauty standards”
 “body image”
 “fear of missing out. Comparing highlights to regular life highs only visible not Lows”
 ” body image / beauty standards”
 “fear of missing out for sure”
 “or just overwhelming absorption of information regarding literally anything”
 “I have skin issues so I feel ugly seeing others looking really nice”
 “how different body types become a trend that's not OK”
 “body image and unrealistic greedy standards make me feel so ugly honestly. seeing people my age doing things like travelling and living their best life makes me feel meh”
 “unrealistic beauty standards”
 “flawless skin and body more privileged, in better positions in life (not feeling good enough)”
 “seeing people my age become successful and live life makes me feel like I'm wasting my time”
 “wasting time whilst others aren't”
 “the pressure of looking presentable/having good content like everyone else”
 “unrealistic body standards and the pressure to buy that latest item or else would fit in”
 “unrealistic things in general”
 “comment sections”
 “fear of missing out”
 “when I see women with beautiful figures”
 “fear of missing out”

“it ranges from news about world issues, I feel like I need to change to seeing a group of friends hanging out without me”
 “unrealistic beauty standards”
 “I worry that people are bashing their own mental health on others actions online too much”
 “fear of missing out, unrealistic be standards”
 “unrealistic standards. Live/ real skin/ the people”
 “body image, watching people travel and go with their friends”
 “seeing others achievements makes me feel like I'm so far behind in life but Oh well”
 “constant toxic trends, excessive negative views overstimulation in every area”
 “toxic trends, body image, be standard, unrealistic ideas of success”
 “fear of not achieving milestones at certain age. I'm scared I'll be behind”
 “fear of missing out for sure”
 “fear of missing out not being able to live my life to the fullest”
 “unrealistic beauty standards mainly people who lie about surgery and facetune”
 “fake news”
 “body image”
 “high beauty standards/ filters”
 “a fear of missing out wanting to grow up too fast not enjoying my childhood”
 “will the unrealistic body standards”
 “people who only show good stuff/ makes you feel not good enough, like you are falling behind”
 “surprisingly firm, but I do put my art and I compare it to others which makes me feel sad”
 “fear of missing out”
 “bigotry”
 “fake news, be standards”
 “people hating on each other”
 “fear of missing out, standard beauty”
 “fake news and unrealistic beauty standards”
 “repetitive content and people not staying true to themselves”
 “religious bashing and social issues with fake news also”
 “shrink only the good stuff”
 “the rule of perfection that everyone used that causes a lot of people to feel unblessed”
 “unrealistic beauty standards and fear of missing out”
 “body image, filters, money, their achievements”
 “body image/ people with their big following that don't use their platform correctly”
 “unrealistic body standards, fear of missing out feeling like I'm not doing anything good with my life”
 “UNrealistic beauty standards-I end up feeling sad because my body is in a certain way”
 “fear of missing out on realistic be standards”
 “I've got PCOS I used to be happy with my weight but I feel fat when I'm on certain pages here”
 “the overloaded information and content”
 “body image”
 “Photoshop and facetune”
 “feel like you're living wrong because others have a lot”
 “fear of missing out fake news”
 “filters”
 “but the image, fake news, right wing drama”
 “FOMO”
 “Body image”
 “fomo”
 “this sounds stupid I think but it's probably the mean pages where they say things like how someone isn't thinking about you to go to sleep or so on but more seriously is probably the ones where you'll put down negatively or when comedy pages mock others”
 “everyone seems to have their life together on Instagram. Nice clothes comment travelling and married I don't have”
 “the low rise Jean Ford slash flat tummy trend”
 “explore page with unrealistic beauty standards, plastic surgery being normalised”
 “just a constant perfect life”
 “expectations such as working out and having the perfect body”
 “success”
 “fake news, filters, algorithm”
 “negative people, fake news, everyone looking for a shop, constant competition and trends”

“just the fact that I'm wasting time, literally nothing else”

“Tik Tok has a huge sectarian divide lots of Muslims bullying others because of beliefs, as well as philtres we are losing track of our natural beauty”

“wanting to get married and having bridal stuff all over my explore”

“misinformation or being stuck in a social bubble and not being able to learn perspectives of others”

“people being unsafe and giving their unnecessary opinions on things”

Analysis:

Preliminary codes/Frequency of words:

- Standards 37	beauty standards 26	of missing out 20
- beauty 32	body image 20	fear of missing 19
- body 30	of missing 20	unrealistic beauty standards 15
- unrealistic 28	missing out 20	makes me feel 5
- people 25	fear of 20	beauty standards body 4
- image 23	unrealistic beauty 17	beauty standards and 3
- missing 21	fake news 12	me feel like 3
- fear 20	feel like 8	the good stuff 3
- like 19	me feel 6	beauty standards filters 3
- feel 16	the good 5	feel like i'm 3
- fake 15	for sure 5	
- life 14	Unrealistic body 4	
- news 14		
- seeing 12		
- good 10		

Word diagram:



Question 10: do you think fake news on Instagram slash Tik Tok has increased your anxiety?

Yes (827)

No (609)

Question 11 how does Instagram or Tik Tok help with your mental health?

Open question responses all from different participants:

“Distraction and stuff from real life”

“Yes it helps me from going into deep thought if I was by myself”

“keeps me distracted on the contact with friends”

“destruction and being able to talk to my friends”

“some people share the “real” world start it makes me feel not alone”

“ it helps me with my scenarios”

“I take inspiration for fashion and makeup”

“it's a break kolmar enables me to see that it's not just me struggling with lockdown”

“I normally have Islamic videos that called from that for you page which has helped me with my mental health”

“distract me from the thoughts inside my head”

“it distracts me”

“it's a great distraction for my mental health”
“keep up with friends”
“keeping up with the news and having resources from therapists I could never afford otherwise”
“yes, there is a lot of nice content out there”
it helps just relaxing”
“I just use it to see what's going on with everyone and keeping track of the people I love”
“quotes”
“there's a lot of advice from other users who give tips and it's also great destruction”
“helps me for passing my time”
“by watching funny content keeping in contact with my friends”
“it's a nice distraction”
“I feel like it helps, we escape the stress of uni and life in general”
“Nice to look at”
“gives me a laugh when I need it and its fun”
“some accounts about mental health (like @wnrs) helped me”
“Distraction”
“Memes, makes me feel like I am not alone”
“Definitely a distraction”
“I get to connect with the wider community and find people who are just like me and help me feel like I am part of something”
“Defo a distraction from life but I'm able to read up on it and adapt ways to improve on health”
“it distracts me from the bad sometimes”
“Motivation to do things for yourself and around your home”
“Funny videos helps take my mind off things”
“Besides negative content you find useful tips that you never learned at school”
“a mini distraction from work stress”
“Distraction”
“a nice distraction and inspires me in art”
“communities – people I love”
“seeing other peoples worlds”
“it gives me comfort by seeing others as it gives almost warmth and community vibes”
“I post a pic and get compliments, I sometimes get dms from guys that boost my self-confidence. I also sometimes aspire to be like certain people so like watching I read quotes to help me through my anxiety at night.”
“distracts me from any pain I feel”
“up to date, with news body positivity (sometimes)”
“a lot of relatable creators you can connect with”
“source of procrastination”
“inspiration for art”
“reminders”
“tiktok makes me giggle”
“quotes and encouragement videos”
“it's a distraction from reality of life and it keeps me from being alone with my thoughts”
“people being honest about how they feel on social media so it is relatable”
“distraction and I like to see creative content like makeup and art”
“there are some things that can help when it I targeting on the right things such as how to destress”
“makes me laugh”
“feel motivated and inspired. Also helps to follow MH awareness instagrammers”
“Islamic reminders and other content not related to beauty/current situation e.g. food etc”
“there is a lot of talented and funny people out there”
“a lot ways to calm yourself and take care of yourself”
“allows you to keep up to date with people that maybe you would never text”
“socials really influence how you think so following accounts who inspire you can be so helpful”
“There are benefits from Islamic or just general information that are useful such as the Ramadan planner that you had created for free”
“I like the memes”
“it makes me laugh and forget that I am depressed for a second”
“friends”
“only the fun and funny stuff e.g. meme”
“I like seeing the content creators create makeup looks and do outfit looks with beauty hauls”

“makes me laugh most of the time, helps me to stay connected during isolation!”

“Passes by time so less time to think”

“can be a great distraction when life’s too much”

“find something intriguing unexpectedly in these repetitive times”

“it helps me relax after doing my homework”

“it contains content that make you laugh can distract you for a while and also help mentally”

“staying connected, following positive pages”

“gives me something to do”

“I am able to be inspired by other people’s arts and creativeness which motivates me”

“it is sometimes an escape and nice downtime to just scroll through content”

“Distraction”

“Definitely a distraction”

“I get to see aesthetic thinks, hacks, even educational content”

“Distraction, destressed”

“It’s a distraction”

“keeps me occupied/motivated. There are some positive spaces on Instagram too”

“Tik tok is a great distraction but its bad if you are a procrastinator”

“Takes my mind off of stuff and acts like sort of a reset button where I get to scroll and ignore life’s problem’s for a bit”

“distraction, good ideas to help with different problems, entertainment”

“a lot of people relate to me”

“I feel less alone and like there are so many people with similar struggles as me so we can help each other in this community”

“it relieves any anxiety and distracts me when I feel down or overwhelmed – I am autistic – “

“getting updated to news and release stress after watching motivational videos”

“It is a great distraction”

“it’s a distraction from the world outside my phone especially when BLM was going on and other political protests”

“it keeps me entertained and I am able to interact with people”

“the clips from my fave animes on shows make me so happy”

“it keeps me entertained and I am able to interact with people”

“yes it is a great distraction and tool to laugh and relax”

“great distraction”

“it helps me have time to myself”

“Tik tok distracts me from my problematic family”

“It is a form of escapism but also where I can meet new people and make new friends”

“distraction and destressing. Low self esteem”

“umm I guess it kind of entertains me”

“Positivity accounts, more inspirational content creators”

“distraction from reality”

“distraction”

“pass time”

“I use it as a distraction to look at pretty pictures”

“inspirational”

“distraction, funny”

“Like seeing pretty pictures, I follow great people who inspire me”

“keeping up to date, weird but hate watching the actual news” – demographic

“a distraction and memes to help me relax and laugh more”

“I live in another country, so it helps me communicate with my family and friends who are abroad”

“I use it as a de-stressor”

“I actually learned a lot from it”

“it kind of makes me laugh and at times you can find knowledgeable posts”

“Tik Tok is a great distraction but Instagram is so draining” – possible comparison of two applications and how they make users feel

“Makes me chuckle”

“friends like you”

“it helps me make a difference, see creative things and inspires me to work on myself and my business”

“jokes”

“temporary distraction will create issues later on in life “

“love the comedy and the relatability and learning useful things, feeling more motivated after watching certain content”

Analysis:

Preliminary codes

- Distraction
- Pass time
- Quotes
- Inspirational
- Anxiety

Frequency of words:

- | | | | |
|---------------|----|-------------------|---|
| - Distraction | 30 | it helps | 8 |
| - people | 15 | helps me | 8 |
| - like | 15 | makes me | 8 |
| - helps | 12 | a distraction | 8 |
| - content | 11 | great distraction | 7 |
| - feel | 10 | is a | 7 |
| - great | 9 | a lot | 7 |
| - friends | 8 | i am | 7 |
| - makes | 8 | distraction and | 6 |
| - laugh | 8 | me from | 6 |
| - life | 7 | | |
| - lot | 7 | | |

Word diagram:



Appendix D: Secondary questionnaire data tables

1	Do you use Tik Tok or Instagram	Results
A	Tik Tok	574 (29%)
B	Instagram	1,072 (55%)
C	Both	300 (15%)

Table 13 showing figures for participants who use social media in second questionnaire

2	Do you feel like spending time online has helped you during lockdown?	Results
A	Yes	1,451 (60%)
B	No	970 (40%)

Table 14 showing figures for participants answering if using social media has helped during lockdown in second questionnaire

3	How much time do you spend on Instagram/ Tik Tok during lockdown?	Results
A	1-3 hours a day	200 (8%)
B	3-5 hours a day	1,121 (46%)
C	5+ hours a day	223 (10%)
D	less than an hour a day	176 (7%)
E	7+ hours a day	590 (24%)
F	I don't know I don't keep track	120 (5%)

Table 15 showing figures for the destinations of participants in second questionnaire

4	What app do you spend most of your time on?	Results
A	"Instagram"	154 (35%)
B	"Tik tok"	134 (31%)
C	"Youtube"	39 (9%)
D	"twitter"	32 (7.4%)
E	"Netflix"	25 (6%)
F	"Snapchat"	16 (4%)
G	"Whatsapp"	7 (2%)
H	"Pintrest"	5 (1%)
I	"Facebook"	3 (0.69%)
J	"imessage"	2 (0.46%)
K	"discord"	2 (0.46%)
L	"Email"	2 (0.46%)
M	"Amazon prime"	2 (0.46%)
N	"clubhouse"	1 (0.2%)
O	"Microsoft Teams"	1 (0.2%)
P	"Google Meet"	1 (0.2%)

Q	“Reddit”	1 (0.2%)
R	“webtoont”	1 (0.2%)
S	“Tumblr”	1 (0.2%)
T	“CrunchyRoll”	1 (0.2%)
U	“House Party”	1 (0.2%)
V	“weverse”	1 (0.2%)
W	E Books (Kindle)	1 (0.2%)
X	“safari”	1 (0.2%)
Y	“messages”	1 (0.2%)

Table 16 showing figures of what apps users spend the most time on in second questionnaire

5	What do you use to keep track of your spending time on Instagram or Tik Tok ?	Results
A	Screen time for iphone	2407 (87%)
B	Screen time for android	120 (4%)
C	Another app on my phone that keeps track	220 (8%)
D	I don't use anything to keep track of time on apps	30 (1%)

Table 17 showing figures of what users use to keep track of time when on Instagram and Tik Tok in second questionnaire

6	Do you think that it is healthy to spend the amount of time that you do on Instagram and tik tok?	Results
A	Yes	320 (17%)
B	No	1575 (83%)

Table 18 showing figures of question 6 in second questionnaire

7	Do you use Instagram or tik T.O.K to create content or just use it to like stuff and keep up to date with friends and family	Results
A	Content creator	232 (13%)
B	User	1561 (87%)

Table 19 showing figures for question 7 in second questionnaire

8	How far would you agree with this statement “social media negatively affects my mental health”	Results
1	Strongly Agree	657 (44%)
2	Agree	200 (13%)
3	Disagree	150 (10%)
4	Strongly Disagree	33 (2%)
5	Neither	167 (11%)
6	Not sure	297 (20%)

Table 20 showing figures of Likert scale from question 8 in second questionnaire

10	Do you think fake news on Instagram slash Tik Tok has increased your anxiety?	Results
A	Yes	827 (58%)
B	No	609 (42%)

Table 21 showing figures of question 10 in second questionnaire

Appendix E: Interview data

Interviews carried on the 9th of March 2021.

Total number of participants: 18

Female: 16

Male: 2

Age group: 15-28 N, N

Countries: UK, UAE, CANADA, KUWAIT, Denmark, Bulgaria

Interview 1

Name: Taslim

Age: 24

Gender: F

Country: Canada

Transcript:

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: During the pandemic I have used mostly Instagram, Tik Tok and Twitter to network with other business professionals in order to attempt to move my business online (focusing on marketing and advertising). However, my personal usage has also increased. It's about a 50/50 business and personal use right now. I have been using social media to connect with family and friends but have found myself spending time idle on socials - simply scrolling through aimlessly and stuck in the algorithm cycle of constant content showing up on my page.

Interviewer: Question 2: How has it HELPED you mental/generally and What social media app is your favourite, do you think you spend too much time on them? Or just enough? (Just a side note that this is the positive stuff and then I will be covering the negative in the next question)

Response: Has helped me a lot with communication with my family and friends as well as on a business level - however I have been using it quite a bit and I feel that it has impacted my vision and caused headaches- also has contributed to my insomnia because I'm stuck on the app for a while sometimes.

Interviewer: have you ever experienced the negative consequences of social media, such as any negative mental health related thoughts? If so, what were they and how did it happen? (I know this can be personal, but you can be as general and open as you wish)

Response: Yes, I have. I find myself scrolling for long periods of times which results in less sleep and this has significantly affected my mental health and drive over all. I also find myself getting obsessed with certain trends and wanting to take part but then missing the chance and watching everyone else do it. I have taken initiative to now only have it focused on my business.

Interviewer: Question 3 Do you think there is any solution to this growing issue of addiction to social media? E.g. screen time or something you use to keep control etc

Response: Yes, I definitely use screen time to keep track of how much I use different apps and this helps me keep on top of my habits and control them. I think a great solution is challenging yourself to go a certain amount of time without

Interviewer: Question 4 Should the developers should be responsible?^[SEP] Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? And do you think they are trying to change it?

Response: I think the developers should be somewhat responsible because of the ads and ad revenue that they are earning they are for sure exploiting off their customer base rather than trying to help the customers. I think only recently Instagram took a change in not showing the likes and having an option to turn off comments and likes all together which could help with mental health quite a lot. This situation can also be applied to bullying etc for example with the case of Caroline flack, she was bullied by the media and ended up taking her own life, Unjustly Instagram comments 100% played a part in all of this.

Interviewer: Do you think that it's the user's fault or the apps fault for people who end up getting so addicted?

Response: I think it's both the user's fault and the application developers' fault for the addiction, the user should have some restraints in place but perhaps developers should introduce the possible addiction that can happen from overusing the apps. Of course they cannot control the user but there should be some safety features pre-installed, age should not be the only question asked before users join.

Interviewer: If social media sites value the protection of their consumers, for e.g. privacy, should their mental health come under that protection?

Response: Yes I think it should for sure come under that protection because mental health is just as important as physical health and not including some form of protection is disregarding it completely. I am not sure how they would introduce it but perhaps privacy or a tutorial on all the safety features could be introduced.

Interviewer: And lastly Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: Yes! I use a few apps to track mine and although it can be tiresome it keeps my mental health in check. It would be amazing to have an app that could track everything in one place without having to constantly go on different apps/websites.

Interview 2

Name: Hiba

Age: 21

Gender: F

Country: Canada

Transcript:

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: Sorry for the super late reply! But I've been using social media lately as entertainment and to distract myself (sometimes unintentionally), and to just help get through the days tbh.

Interviewer: No worries! So I think we can delve deeper into two parts:

- What makes you keep coming back to Instagram, Do you think you spend too much time on them? Or just enough? (This is more about self control)

- and have you ever experienced the negative consequences of social media, such as any negative mental health related thoughts? If so what were they and how did it happen? (I know this can be personal but you can be as general and open as you wish)

Response: for the first part, I think it's a psychological thing, like how you keep checking the fridge but yk there's nothing to eat. Even when I'm busy, out of habit, I'll still open it up for a quick scroll. I think I spend way too much time on all social media, especially these days, it's been a way to procrastinate and just avoid stuff (people, problems, school homework lol) and there is a definite lack of self control because I feel like it's become too easy to just divert yourself from your own reality. for the second part, definitely. even though, I like to tell myself I'm different LOL Instagram has made it very easy to compare yourself to your perceptions of others. whether that's someone's life, wardrobe, personality, vibe, body, etc. It's become way too easy to see people who 'have it better than you.' And it's not a conscious thing but I have felt that it's affected me subconsciously and it can lead to you feeling ungrateful, so I have to be very conscious of that. It's not like it's envy, it's just a source of ungratefulness. and I find that ungratefulness can have an impact on ur emaan as well so yeah. other than that, I feel like it gets extremely overwhelming. Although, ig personalizing your explore page can be a beneficial thing, I found it can impact u very negatively too. There was a time where there were a lot of rapes happening in Pakistan and I was searching this stuff up too. but there came a point where everything in my explore feed was about that. And as much as I'd love to stay informed abt these things, it's such an overwhelming feeling to read so many of my other sisters' vile experiences. and I kinda absorb stuff too, so even after I would close my phone. That's all that would go through my head. It instilled a sort of fear in my head as well as just made me wanna lock myself up in my room cuz the world is such a cruel place. and I find that if you don't snap yourself out of these trances almost, it's very easy to stay in there and allow yourself to get lost.

Interviewer: Question Do you think there is any solution to this growing issue of addiction to social media? E.g. screen time or something you use to keep control etc

Response: I believe self discipline is honestly the real solution. There are many things to help us use our phone less but they're all very easy to ignore. maybe if we had something to help limit notifications, that would help us lessen the time we spend on our phones (I think we already have that lol) it just comes down to self control. I find that busying myself helps a lot. Spending time with friends and family, going on a walk, working out, working, etc. The more busy I am, the less time and energy I have to spend on my phone. But maybe if there was a way that apps like ig, tiktok etc could be locked and it wasn't easy to open them after without 'consequences' would be helpful. like every time I try opening a certain app, it lets me but the next time I try, the app is locked for 15mins or more. Something like that.

Interviewer: Question Do you think the developers of platforms like Instagram should be held responsible and accountable?

Response: I don't think they should necessarily be held responsible. Bc I think we all have addictions and it's just necessary to get that high off beneficial things. But these platforms should do a better job of having more options that promote a normal amount of usage. like I appreciate tiktok having a time limit and that reminder to go to sleep. It's on me when I ignore those LOL but they're doing something to say that this isn't all u should be spending ur time on.

Interviewer: Question Is it the social media's fault or is it the user's for getting themselves so addicted? and If social media sites value the protection of their consumers, for e.g. privacy, should their mental health come under that protection?

Response: I do think it's the app's fault but at the same time, our health should be OUR first priority because it clearly isn't for these social media platforms. They benefit off our addictions and create ways to make their platforms more and more addicting and easy to get lost in. So it's necessary for us to learn to practice self discipline. And yeah I do think that our mental should come under consideration if not protection. the original Instagram showed us just the people we followed and that was good enough. But now we have the explore page to just waste hours in. And these features are added with the intent of being addicting. So it's definitely the apps fault but we have to be proactive abt it. If there is a way to somehow offer users protection thatd be great but it doesn't seem that feasible currently.

Interviewer: Question Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: I definitely think that would help a lot of people. The first step to improvement is always identifying that there's a problem and an app like that can help you regulate and realize that. And that will help users monitor their usage and emotions better and implement whatever changes are required.

Interview 3

Name: Momena

Age: 26

Gender: F

Country: UK

Transcript:

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: Mostly use social media for the following: posting content, staying up to date with what friends etc. are up to and endless entertainment!

Interviewer: The next part will delve deeper into two parts:

- What makes you keep coming back to Instagram, Do you think you spend too much time on them? Or just enough? (This is more about self control)

- and have you ever experienced the negative consequences of social media, such as any negative mental health related thoughts? If so what were they and how did it happen? (I know this can be personal but you can be as general and open as you wish)

Response: It's like an automatic thing for me to do as soon as I've gone on my phone...go on instagram to see what I've missed. Or if I'm bored I'll go on the socials. Sometimes I have good control but mostly when I have a busy day as it means I genuinely have no time for my phone. Other days it will be because I have nothing else to do or because I want something to do - and so I will use the socials to pass time as a form of entertainment. In terms of negative consequences- I suffer from mental health issues and one of the things that trigger me is the feeling of loneliness. Using platforms like instagram and seeing others and what they're up to with friends etc. Makes me feel very lonely in life, like I have no one to share experiences with or talk to etc. This consequently starts a chain of sadness, sometimes leading to depression and a dip in my mental health. The loneliness will trigger so much more for me. And the days can just feel unhappy where nothing brings joy. It can also lead to comparing myself to others. And wishing I was as happy as others. It can take days/weeks sometimes before I'm out of the cycle of feeling low and making myself feel so sad.

Interviewer: Thank you so much for the incredible insight I can't tell you how thankful I am, This leads me to the next question Do you think there is any solution to this growing issue of addiction to social media? And do you have any solutions of your own that you use when you feel like you may be using social media too much?

Response: Limiting the time used on social media/limiting the content seen, maybe a reminder to tell you to take a break. Reminder of self care and self love and ensuring that one doesn't get wrapped up in what they see online. Myself, I'll take a break and do something else instead, e.g. interact with family members, watch a movie, do some baking or go on a walk - just anything to get my mind someplace else.

Interviewer: Do you think the developers of platforms like Instagram should be held responsible and accountable? Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: They should, but I know for them it's their business so they don't mind people spending hours on it regardless of the implications. But at the same time they should have the responsibility to take care of the mental health of the users and keep the platform as a positive thing.

Interviewer: Question Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: I think they could probably tell by their data that more and more people are using the platforms and that the usage time is going up so definitely obsession is there. I don't think they're actively trying to change

that as again that's a good news for them. They in fact are continuously adapting the platforms to make it even more engaging for individuals. TikTok in itself because the way it's been set up people can be on it for hours without realising and can be hard to stop as you think to yourself it's just one more quick video.

Interviewer: Question Is it the social media's fault or is it the user's for getting themselves so addicted? and If social media sites value the protection of their consumers, for e.g. privacy, should their mental health come under that protection?

Response: I think similar to substance addiction it is both the users fault as much as the person initiating the connection. So I believe the user must take their own protection whilst social media organisations focusing on creating better awareness for users with much stronger ways to prevent the addiction. This can be done presenting extra awareness.

Interviewer: Question Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: Yes! I am a huge advocator of tracking your mental health in order for it to get better. I think an app where it can track exactly which social media sites are causing a downfall in your mental health would be perfect. Especially for therapy, as there is a huge gap between consultants understanding that phones have a huge play in how someone's emotions can be affected.

Interview 4

Name: Amber

Age: 19

Gender: F

Country: UK

Transcript:

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: I started using tiktok for time pass especially when the pandemic started and made my own videos to weird trending sounds. Then I started following fashion bloggers and cooking pages. I've learnt a lot of recipes from tiktok and styling tips. Honestly only have Instagram because memes or just to keep up to date with my friends really.

Interviewer: Question 2: How has it HELPED you mental/generally and What social media app is your favourite, Do you think you spend too much time on them? Or just enough? (Just a side note that this is the positive stuff and then I will be covering the negative in the next question)

Response: I really love Twitter 😊 think generally when I'm in a bad mood I just know I'm going to find something funny on Twitter. Like since yesterday there's just been so many memes trashing the royal family (we love to see it)

Interviewer: Question 3: have you ever experienced the negative parts of social media such as any negative mental health thoughts? If so what were they and how did it happen?

Response: Yes definitely!!! Like recently when women started talking about how they feel unsafe walking home and the stats showed that 97% of women have been sexually harassed. Men in the comments terrified me... hearing comments such as let's make it 100% really affected me. I refused to leave my house. I just felt omg the world is such an unsafe place I don't want to go out. Sometimes I'll go on Twitter and it's just murders on my page and you just think woah I need this stop. There'll be no trigger warning or no context on the video but people rly be uploading murders ?? Like have some shame. That's how I felt the world is such a bad place and that something would happen to me.

Interviewer: I want to say thank you so much for choosing to share that with me I understand it can be so hard to talk about and I'm so sorry you went through all this.

Interview 5

Name: Abrar

Age: 19

Gender: female

Country: UK

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: Okay so I mostly use Instagram I don't have tik tok since Instagram is doing the job. But I use it for passing time, talking with some friends, just trying to distract myself from the constant boredom that we are in.

Interviewer: Question 2: How has it helped What social media app is your favourite and you think you spend most of your time on? Why do you like it so much?

Response: First part of your question, mostly to talk to my friends and people that I've met on Instagram. I'm just bored most of the time so even if I don't use it as much there's a sense of satisfaction to it 😊 I think I use it just enough, about 3-2 hours almost every day.

Interviewer: Question 3: Have you ever experienced the negative consequences of social media, such as any negative mental health related thoughts? If so, what were they and how did it happen? (I know this can be personal, but you can be as general and open as you wish)

Response: Second part of your question:

Yes I have! It's body image related. The standard beauty image and how everyone looks a certain way. At some point my Instagram feed used to be models and skinny girls only but then I decided to unfollow all of them, since it's not healthy to me. I still feel a bit self-conscious but it's definitely not like before.

Interviewer: Question 4: Do you think there is any solution to this growing issue of addiction to social media? And do you have any solutions of your own that you use when you feel like you may be using social media too much?

Response: Of course there is!! First of all you'll have to have a will to stop or minimize the use of social media and you can always take a break from your phone and talking to people and pick up a new hobby, do yoga, learn more about yourself, pray, read more etc

Interviewer: Should the developers of platforms like Instagram should be held responsible and accountable? Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: Surprisingly no because everyone is responsible for their own selves and you should be able to decide what is too much and too little of something, basically having a sense of self control. At the end of the day it's their job and they're trying to make a living out of peoples misery which is unfortunately the case nowadays.

Interviewer: Question Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: I think they are aware and they're trying to take advantage of that too since they'll and are profiting a lot from it.

Interviewer: Question Is it the social media's fault or is it the user's for getting themselves so addicted? and If social media sites value the protection of their consumers, for e.g. privacy, should their mental health come under that protection?

Response: I think they are both equally blamed for addiction. Because a user needs to manage their time and control themselves and social media or the creators, have to stop taking advantage and coming up with new creative yet addictive content.

Yes they definitely should have a mental health tracker within the app since they know people are addicted the least the could do is make sure that they are not suffering while doing it.

Interviewer: Question Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: I really hope so but a part of me thinks that people won't commit to it just because it seems like too much work or they just have up on the idea of feeling better.

Interview 6

Name: Jouri

Age: 15

Gender: M

Country: Kuwait

Transcript:

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: I use instagram to keep up to date with my friends and as a source of entertainment. I also use tiktok for entertainment but I deleted it because I don't wanna fail my IGCSE exams.

Interviewer: Question 2: How has it helped you (mentally/generally) and What makes you keep coming back to Instagram/TikTok Do you think you spend too much time on them? Or just enough?

Response: I think that I spend A LOT of time on instagram but I'm working on reducing my time on any social apps as it's kinda affecting me physically and mentally. The entertaining content on my feed and the texts I receive from my friends is what makes me come back every time.

Interviewer: Question 3: have you ever experienced the negative parts of social media such as any negative mental health thoughts? If so what were they and how did it happen?

Response: Yes, social media can be quite draining and overwhelming sometimes. You always see others having something that you've always wanted and then end up with so many questions in mind. For instance, when quarantine started, I gained a lot of weight and I was so unhappy and because it was such a stressful time and I had so many pimples. I really hated myself and every time I go on social media I'd find others enjoying their time and nothing's wrong and this would make me feel like I'm doing something wrong. I'd always compare myself to others and wonder what's wrong. I feel like social media has raised everyone's expectations and

standards of beauty which is very sad. Here I am a year later, I stopped thinking about everything that made me upset and now I've lost so much weight without doing anything different and most importantly I'm happier الحمد لله. It can also be stressful sometimes. I think that people are now worried about being judged by others or by not "fitting" into a certain group just because they are different. Yesterday I was celebrating my birthday and I posted a few photos on my story, my friends went crazy and they told me that I had to post it on my feed and so on. I can't emphasise this enough but I was so nervous when I posted it because all I was thinking about is "what would others think about it? Am I posting too much? What if they judge me? Do I look good in it?" Mind you, I loved the photo and I was confident about posting it but I have no idea why I was literally so so nervous as soon as I clicked the "share button". To be honest, social media is one of the main reasons why lots of people out there are not that confident and they don't feel good about themselves.

Interviewer: Do you think there is any solution to this growing issue of addiction to social media?

Response: I started using social media a lot less when I stopped comparing myself to others. Also, I unfollowed everyone who don't make me feel good even if we're friends and made sure my circle is as small as possible. Now I only follow people who inspire me and make me feel good about myself (like you <3). This helped me reduce my time on social media significantly because I'm not always thinking about others and trying to be like them.

Interviewer: And do you have any suggestions that you have used yourself to get off Instagram or TikTok etc

Response: yes, I've turned off my notifications for Instagram and this did help A LOT, I deleted tiktok but instagram decided to introduce reels lol

Interviewer: Do you think the developers of platforms like Instagram should be held responsible and accountable? Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: Tbh I don't think there's anything the developers can do to help us get over this obsession because the problem is in the user. Everyone knows what's good for them and what's not and it takes time for a person to realize that social media is negatively impacting their mental health. That's when they start reducing their time on social media and eventually get over this obsession. No, I don't think the developers are trying to change this because they've been introducing lots of new features that entertain the users and this causes them to spend more time on social media. I don't think this is not a bad thing since it's a source of entertainment and that's what everyone needs during those hard times.

Interviewer: Question Is it the social media's fault or is it the user's for getting themselves so addicted? and If social media sites value the protection of their consumers, for e.g. privacy, should their mental health come under that protection?

Response: yes! it would definitely help reduce the negative impact social media has on mental health. For example, I would always see lots of people commenting rudely on other people's posts and they are quite harsh tbh but when people report those comments apparently they don't go against the 'community guidelines' 😞 when it's CLEARLY cyber bullying.

Interviewer: Question Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: ofc, I felt a lot better when I actually realised what makes me feel down while using social media. Lots of things have changed since then, it changed the way I view things and my thoughts about myself. Social media isn't always bad, if it's used responsibly and properly it would make things a lot different. It will be a good and safe place for everyone when people stop comparing themselves to others and understand that what they see on social media is only a small fraction of that person's life and there's a lot bad/good stuff going on that they don't see.

Interview 7

Name: Maryam

Age: 23

Gender: female

Country: Saudi Arabia

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: tiktok - entertainment only instagram - education, inspiration, and friends, I'd say I use social media for different reasons such as each application has its own purpose such as twitter is to keep up with things and entertainment, Instagram is more educational purposes and inspiration and tiktok is purely entertainment. I define social media as a break to detach from real life. Generally I use it to keep up to date with things.

Interviewer: Question 2: How has it helped you and What makes you keep coming back to Instagram, Do you think you spend too much time on them? Or just enough? (This part is a little about Self control too)

Response: Generally, I wouldn't say it's been much of a benefit to me. even tho i use it for inspo and educational purposes, i tend to use pinterest or twitter more often for those reasons. I defo spend way too much time on insta aimlessly scrolling through my explore page. i've tried using downtime from my setting which

sets a time limit and locks you out of certain apps but then i removed it lol. i'm defo too dependent on instagram as an escape mechanism which isn't healthy at all.

Interviewer: Thank you so much for the responses! My next question is have you ever experienced the negative consequences of social media, such as any negative mental health related thoughts? If so what were they and how did it happen? (I know this can be personal but you can be as general and open as you wish)

Response: yup i have. i feel like it's defo impacted my self esteem and self confidence as a result of comparing myself to other People.

Interviewer: Do you think there is any solution to this growing issue of addiction to social media? And do you have any solutions of your own that you use when you feel like you may be using social media too much?

Response: tbh i feel like the only 'solution' at this point is just to scrap social media all together. social media is meant for putting out our best lives and i don't see how that will ever change if that makes sense.

Interviewer: Do you think the developers should be responsible?

Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: t he apps. they're designed in a way that gets you addicted to using the app. they know how to get people hooked.

Interviewer: Do you think this responsibility could be reflected through value of protection for their consumers e.g. privacy, should their mental health come under that protection? Or ethical guidelines primarily set?

Response: yes for sure

Interviewer Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: yes somewhat. i think we don't realise how long we actually spend on social media apps and maybe if we could visualise the amount of time we spend on it, it might make people more conscious

Interview 8

Name: Junayd (@juanyd._07)

Age: 19

Gender: M

Country: UK

Transcript:

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: I don't really use tiktok but I use Instagram to acheck up on family and friends I don't really use it for anything else, sometimes may be just to network as I am starting up a small business for a dining experiences, to get in touch with influencers to promote the brand. I do believe it's sometimes a distraction from university but that's it. Mainly during the pandemic, I have been distracted with Netflix and other entertainment applications. Nothing too crazy. I also use it for fashion inspiration, and I do think I end up spending alot of money on clothes etc and to update my wardrobe which I think may be a bad thing.

Interviewer: Question 2: How has it helped you and what makes you keep coming back to Instagram, do you think you spend too much time on them? Or just enough? (more about self control too).

Response: I feel like it's helped more with maybe not trying to distract me but more of my downtime. Cuz more time I'm like going out with mates, chillin, smoking shisha etc. But I feel like it's an alternative to like what the Norm would be because of COVID. If you understand me? I feel like I try to limit myself to as minimal amount of time on it as possible, only because I do get easily distracted nd then I won't be able to do uni work 🤔🤔 but some days My timings okay but other days it's like kinda shitty. Like when im havin a bummy day for example. But nah in general I do feel like I spend too much time on it 🙄

Interviewer: Question 3: My next question is have you ever experienced the negative consequences of social media, such as any negative mental health related thoughts? If so what were they and how did it happen? (I know this can be personal but you can be as general and open as you wish)

Question 4 Do you think there is any solution to this growing issue of addiction to social media? And do you have any solutions of your own that you use when you feel like you may be using social media too much?

Response: Personally for me I never had any social media growin up so like, getting negative mental health from it wasn't an issue but I see how it can now a days. Like for me personally my family wasn't the wealthiest ppl so like we had like have hand me downs nd etc, so seeing ppl now a days on social media, ppl have the belief that you have to have the most expensive clothes or have this persona of being "rich" otherwise you'll get judged/looked down upon. Which I think is completely wrong but it's easy to feel that way nd have that sort of self hate. I'm wafflin abit but to answer ur question, for me personally no. But, now a days it's a lot easier to have negative mental health from social media a lot easier than before

Yehhh I honestly think like it does get addicting 100%, because like now you have the “need” to snap where ur going, what u eat, etc. As well as when ur at home chillin u just flick thru insta or snap. So it begs the question of ‘when aren’t u really on it?’ In this society/time.

Yehhh I basically like either put on a timer for example dictating how long I’m on it for or just put my phone away from me. Cuz if ur phones in arms length ur more likely to go for it 🤖 but yeh either a timer or I was maybe thinking of getting those app locker type things if ygm? Like the ones where u have a certain amount of time nd it locks u out until u put a password

Interviewer: Question 5 and 6: Do you think the developers of platforms like Instagram should be held responsible and accountable? Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: Yes and no, yes because like I think they don’t stop things like negative mental health from happening in terms of like the clothing example I gave before for clout etc. Insta gives ads that might make ur mental health worse showing ppl wearing certain types of clothing as an example without the function of removing certain genre of ads if ygm? And no because like they do tailor it to what u like and who u follow I guess 🤖 so it’s abit of both. Nd for insta it’s a marketing strategy so I guess in that case they don’t rly care as long as they’re making money

I feel like social media apps do acknowledge the fact that ppl are deffo using it a lot more than normal, cuz I feel like they monitor ur activity time on the app. And then like show u things that you like to keep u on there to increase their revenue 😞 but they should deffo like atleast do surveys now and then checking up on the user if ygm? Or even like just ask how u are doing today in like a poll format instead of ads. But Nahh to answer ur question yes they are aware nd I don’t think they’re trying to change it, in fact I feel like they’re making it worse to keep ppl on their app more than anything 🤖

Interviewer: Do you think that it’s the users fault or the apps fault for people who end up getting so addicted? :

Response: I guess ultimately it’s the users fault, because the app can’t rly force u to like use it and it’s not like it’s life or death to use it, I honestly think it’s the users job to dictate how long they should be using it.

Interviewer: If social media sites value the protection of their consumers, for e.g. privacy, should their mental health come under that protection?

Response: Yes and no, the app I think has a duty of care for its uses so I think it should like have surveys or like questionnaires on like me tail health or how they’re doin that day for example 🤖 and no because at the end of the day, like it’s up to u to help urself nd pick ur self up. No one especially an app ain’t gonna do it for u kinda thing 🤖

Interviewer: And lastly Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: Yehhhh I think so cuz like maybe u might be on something when ur feelin down nd it makes u feel like more depressed without u knowing, nd then another day u might be idk like happy nd u might check ur activity nd think Tf was I lookin at that nd in turn block seeing them kinda things. Improving ur mindset cuz of what u see nd take in 🤖 idk I always think like ur mindset nd ur mental health is like ur body, u feed it crap I.e look at shit things or things that make u feel shitty then that’s what ur mindset will be and the same can be for the reverse nd boost ur mood. So I honestly think yeh it’s all about perspective nd like u said responsibility so like if they choose to then they can like improve their mental health by trackin their activity 🤖

Interview 9

Name: Rabiah

Age: 28

Gender: F

Country: UK

Transcript:

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: Hey how are you, so my main purpose is to really keep in touch with friends and family and I also enjoy just browsing through bloggers influences and just looking into like outfit inspiration make up tutorials etc. In more recent months I have found an absolute plethora of online life coaches and self-help coaches et cetera who I’m now actively following and engaging in their content and that is the reason for that is because of mental health related issues and I’ve just found in all the content that they pose is absolutely is incredible and life changing stuff. I find that if you follow the right people and

That you actually put in the work yourself. I currently study in university and I’m an aspiring lawyer so I follow a lot of pages on here that are in a commercial awareness update iPhone a lot of love bloggers and a lot of pages

just like simple politics which you know give a brief overview in terms of what's going on in the daily and like the news et cetera so I have a mixture of pages that I'm following right now and to add to that there is a lot of again food content of a lot of food bloggers I'm following for recipes et cetera and in terms of distractions I try not to use Instagram as an actual distraction if I know if I need a little break away from it yeah fine but I try not to overdo it or not you rather do something more productive like like maybe even read a book do some research on the topic that I'm not aware of and I want to research further et cetera to get those of the main purposes musing Instagram.

Interviewer: Thank you so much for the insightful response, this literally answers all 2 of my next questions! So I think we can delve deeper into two parts:

- What makes you keep coming back to Instagram, Do you think you spend too much time on them? Or just enough? (This is more about self control)

- and have you ever experienced the negative consequences of social media, such as any negative mental health related thoughts? If so what were they and how did it happen? (I know this can be personal but you can be as general and open as you wish)

Response: hey Tina so to answer the second part of your question what keeps me coming back to Instagram I would say that it's sometimes boredom probably more often than not actually and usually what when I'm working so in between work I might jump on to Instagram just see what's going on to take a little break and more than not I'm also I'm not going through my actual feed I will tend to go for the storeys and view those instead and see what people are posting and if that content relates to a particular post then am I going to their profile and actually view this Storey the time that I spend on Instagram so I've actually set myself a timer and that's three hours per day that I spend on Instagram and usually by the end of the night that notification does come up to say that I've now reached that three hour limit so on average I'm spending 3 hours on Instagram to me that is quite excessive but it is broken down throughout the entire day is not three solid hours on Instagram I think that to me would be more damaging as opposed to something you know 10 minutes here 10 minutes there see ya just to answer the second part of your question now as to whether we experienced any negative consequences as a result of social media namely Instagram the answer to that is yes in the summer of 2020 I was in an extremely bad place I found myself really comparing myself to influences and just these beautiful girls that I was seeing plastered all over my Instagram feed and it really brought about my insecurities I to the point I actually hated looking at myself in the mirror I didn't feel pretty enough I didn't think that I was beautiful at all I just I felt so unworthy and that was because I was seeing these absolutely stunning girls portraying their most perfect life on social media not only that but also like relationships being plastered on social media it just threw me into a really dark hole make some fortunate because we we know what negative effects you know social media has and we also know that people only put the best versions of themselves out there but yet we find ourselves comparing ourselves to other people and their you know their perfect little world when we know that that's just a small snippet of their reality we don't get to see them when they make ups remove door weather has tired bat or you know when the scrubbing toilets and all that stuff and the fact that we we kind of put these people on a pedestal and we think that web beneath them and nothing is just such a if its not controlled it can be a very toxic environment for somebody who just isn't mentally in a right in the right place

Interviewer: The responses have been so insightful I can't thank you enough! My next question is Do you think there is any solution to this growing issue of addiction to social media? And do you have any solutions of your own that you use when you feel like you may be using social media too much?

Response: I think first of all in order to in order for there to be a solution that needs to be a problem and when there's a problem in order to deal with it you need to have awareness of that problem to then want to find a solution so somebody could be going about their business on social media just scrolling spending hours ET cetera and they might not see that as an issue they might think of it as time well spent whilst for others it might be you know a complete waste of time spending time just scrolling through other peoples fees and not actually achieving anything just seen it as a time pass so for those that do you know see the negative effects of it I think the solution is is first of all like I said being aware and being conscious of your time but for those that are consciously aware I think the timer is a great feature and it should be utilised and the 2nd is I think is finding other ways to really add value to your life I attended like a club Klaus social chat and a lot of people use social media as a form of escapism it to escape their realities and you know some people have got it really really hard right now an covid is partly to blame as well as their own personal issues ET cetera and people rely on social media for that social contact because we're not getting physical touch right now it's almost like we can it's a way for people to really try and connect with others but what we have to really look at is how are we connecting how are we interacting with others are we interacting with our friends and family et cetera through direct messages you know is it through posts and status updates like how are we using social media to interact are we just are we doing those things to have that social contact or we just mindlessly scrolling through feeds it's a tough one because again like it just comes down to the individual themselves recognising and wanting to do something about it so if it's having a negative effect on somebody's melt mental health they need to be able to recognise that and really want to change that film selves in order for anything or any solution to be effective

Interviewer: Do you think the developers should be responsible? Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? And do you think they are trying to change it?

Response: yes absolutely of course, I don't know if you've watched the programme the social dilemma but these developers are fully aware of the impact social media is having on the low on the people and they are responsible of course because they control the algorithms and they control what they want us to see. The other aspect is Instagram is how everything is becoming monetised, so people are now making money and those that are on social media, the influencers the bloggers and you know everyone in that realm they are trying to monetise off their offerings and I feel like that has had a huge impact on people as everyone wants to put the best out there. They want to make sure that it gets enough likes and following and enough attention and when they don't get that attention, when they don't get that following it's like it's almost like it's a reflection on them and them as a person and that's just me thinking out loud in terms of like from the perspective of influencers. But what about those people that on influencers and have a small following; we are almost like sheep following sheep and sometimes because we are seeing this great content being put out there and we want a piece of that we want to aspire to that. Now I'm not saying that everyone but it looks different for different people so for somebody who say has low confidence and is following this beautiful girl on Instagram who's you know, got the most flawless skin, perfect beautiful makeup application and the most like banging body of course you're gonna feel s**t when you know you don't have a body that looks like that, with your body composition you know your curves everything else is completely different to what you're seeing that yeah of course that'll have a negative impact. I don't know from articulating this very well but you know when we go into social media we see the little square, it's literally square after square after square whether that be the beautiful girls whether that be the couples or you know just it's like every single square that I'm seeing is something that I don't have and I feel like Instagram because of the algorithms you go into one picture you see this beautiful girl you see all the likes that she's got you know you wish you had that as well as the likes in those comments, it can and I can see how that can instil right low confidence and low self esteem because you think you have to look like that to look good and feel good and to be appreciated and to be wanted etc and I think that's another issue.

I know this has been discussed before, like the likes and comments being removed on all social media platforms. I was wondering what the likes have an impact on you, What is the benefit on having the likes. In terms of the comments I know it's a double edge sword because I can see the positive and negatives, you can find some positive uplifting comments but then again you can have some negative detrimental and very hurtful comments that can have an impact on someone's mental health.

And in terms of the no likes and comments I would like to say that say no there should be no comments on web developers on optical please should take responsibility for regulating that more closely and more harshly I would say because it is usually those negative comments that have such severe impacts on people and their mental health et cetera but also the positive comments when you're on social media and say you're not in the right place for those comments can be a way of seeking validation as can the likes so should not be removed together so that a person is posting not for the likes not for the comments and nobody can see how much you know traction a particular post has received and I think that in itself is something that could really be yeah it would be interesting to see if that could be trialled and see what impact that then has on people and the way that people then interact with others on social media and in general just what impact it has on that person viewing those posts and making those posts as well in terms of their general mental health. didn't even answer your question are they responsible yes I do believe that their responsible because of the fact that they control the algorithms they control what we see and how often we see an and also the fact that is now become monetise as well I've believed that people are just a bit more obsessed with have one in to become the next influencer one in to become the next big you know social media star I think that has really I feel like that's a bit of a pandemic right now there's nothing wrong at all with making money from social media there's nothing wrong after all with using social media as a platform to really be able to express yourself absolutely not but when not start having an impact on a person's mental health when that becomes your live breathe die yes that is not when it becomes an issue and you know it goes back to that saying like if something doesn't make it to the gra it's almost like it didn't happen and that's you know it's slightly worrying because that's where we're now headed an that's where I'll SoC is now headed it's not just the UK this is like a worldwide thing and are they trying to change it I I don't believe so because what benefit would not have for them if anything we have to think about it you know their business they are going to want to make as much money from this as possible and will they change somethings like I know there was I mean it will come into national law I think as opposed to web developers than themselves suggesting change I think the drive will be more from our own internal policies as opposed to yeah as opposed to app developers saying hey we need change.

Interviewer: I would agree with everything you are saying I definitely experience the negative and positive side of social media and sadly I have become desensitised to a lot of what I see and I've developed a mindset where I

have to tell myself its not real although it is. Do you think that it's the users fault or the apps fault for people who end up getting so addicted?

Response: question I think the responsibility is on both the app developer on the user and the developers RC controlling the algorithms of what we see but it's on us like how we then decide to choose how we then choose to spend that time on social media viewing that content Anne again the developers haven't said you need to spend X amount of hours we ourselves willingly do that so yeah I think it responsibility is on both there

Interviewer If social media sites value the protection of their consumers, for e.g. privacy, should their mental health come under that protection?

Response: could they even have like a social media shutdown where after certain hours there's no more social media until the next day I don't know this endless but again is it something that will happen I very much doubt it when it comes to big tech I just don't have much confidence because one we know that our privacy is in actually safeguarded as as we think it is so if that's not safeguarded what's to say that they would safeguard our mental health and I think a lot of the responsibility then just comes down to that individual obviously that's a lot more difficult because one you have to be aware that social media is having this detrimental impact on you and your life and you second is that you want to do something about it and make that change and for it to not have that impact

Interviewer: And lastly Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: chancier falls question absolutely and I think as we become more conscious about the way certain things make us feel and how we then react to them absolutely we would want to do something about it because I think it's about control right now we feel like when those things have a negative impact on us we are not in control of how that has an impact on us and we're not in control of ourselves but we can reverse that we can reverse engineer that so that we are in control of ourselves and we can put a stop to how this particular content is making us feel an you know it we don't have to suffer but we do so because it makes us feel comfortable in the place that we are right now and I guess becoming more conscious becoming more aware we're trying to step outside of what we're comfortable with our comfort zones and really accepting ourselves for who we are what we are and all of that so yeah I think if people were more consciously aware it would definitely definitely improve mental health absolutely.

Interview 10

Name: Aliyah Hussain

Age: 23

Gender: F

Country: UK

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: I use them both for business mostly, and to stay up dated with friends who aren't local to me!

Interviewer: Question 2: How has it helped you mental/generally and What social media app is your favourite, Do you think you spend too much time on them? Or just enough?

Response: It's actually a daily struggle with my mental health. Especially trying to run a business online solely. It's very cliquey on insta. If you're "in" and buddies with influencers your business bangs because of association, if you're not it's a massive struggle to even get people to view content. The algorithm is soul destroying also. I don't get a fraction of the engagement I used to. I spend less time on now then I used to as I'm starting to give up on it.

Interviewer: Question 3: Do you think there is any solution to this growing issue of addiction to social media?

Response: Personally I don't know about a solution but I think for me, I just woke up one and got sick of being scared of notifications. It's so easy to wake up to smear campaign against you. Like you one influencer doesn't like something or a brand doesn't like something and it's game over, there followers will crucify you. Eyeslay bullied me for a solid year when I started selling contacts. It was vile. That made me stop wanting to open insta. I just couldn't open it anymore. I would open the app to dms from eyeslays followers saying I'm a liar, a scam ect, they would leave comments on my photos, my business suffered so I took a hiatus. Posted only when I needed to and now slowly I stay on a little longer but still only for business.

Interviewer: Question 4: Do you think the developers should be responsible?

Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: I think apps are addictive because of the intention that developers put in when creating the apps so yes developers definitely should be responsible for exploiting user addiction. Whilst developers gain the reward the currency and the fame users are left in a mental self destructive state where they are abusing the product so in return it becomes exploitation. I don't think at this moment in time tik T.O.K is trying to change this I think maybe Instagram did try to change it by introducing the know like and no comment future for users however I

don't think they are doing enough to reduce the side effects of abusing social media. in fact even during the pandemic it's possibly gotten worse I found it in myself so I think something definitely has to change especially for Gen Z and the younger generation.

Interviewer: Do you think that it's the users fault or the apps fault for people who end up getting so addicted?

Response: although it is the users fault for engaging in the app and exploiting the features of the application it is possibly the application developers fault for putting tools there for the user to spend countless hours on similar to gaming the responsibility is on the user however the same way gaming facilities know exactly what they are doing by introducing various levels in a game social media works the exact same with followers likes and comments the difference is that social media ends up being an endless life long game.

Interviewer Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: I think it would be great if people could track how much social media makes him feel and maybe this would decrease the adverse mental health effects that it has on people but this also depends on the user and if they're open to finding out that kind of information they have to be in the right state of mind to accept that social media is causing mass destruction in their lives. but an app would be the first step to raise awareness and how much time people waste on social media. other than that I think this app would help with everyday activities like keeping on top of productivity and lists and jobs so it would be really cool if the app could integrate other things are not just focused on social media too much and also customise what the user can see and do I think what you're introducing is great and I would love to test it out thank you.

Interview 11

Name: Amaal (@amaalhasssan)

Age: 16

Gender: F

Country: Australia

Transcript:

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: Right now social media is mainly like a distraction from reality for me, but it has created me to overthink how i look so right now i'm very insecure of my appearance and tbh i would blame that on social media but i'm so addictive that i don't want to escape form it if that makes sense. And bc covid isn't that prevalent here in australia i don't struggle with communicating with my loved ones so i don't use social media in that aspect.

Interviewer: Thank you so much! I completely agree

The next part will delve deeper into two parts:

- What makes you keep coming back to Instagram, Do you think you spend too much time on them? Or just enough? (This is more about self control)

- and have you ever experienced the negative consequences of social media, such as any negative mental health related thoughts? If so what were they and how did it happen? (I know this can be personal but you can be as general and open as you wish)

Response: the main reason that makes me keep coming back to instagram would be being excluded and FOMO (fear of missing out) bc the main thought going through my mind would be "why does everyone else have it and not me?"

Interviewer: Question Do you think there is any solution to this growing issue of addiction to social media? E.g. screen time or something you use to keep control etc

Response: To answer the first question, yes i do think there are many different solutions for many different people but the one that seems to work for me is to temporarily deactivating my accounts or deleting the app as a whole and taking some time to myself.

Interviewer: Question Do you think the developers of platforms like Instagram should be held responsible and accountable?

Response: But personally i don't think developers of social media platforms should be held responsible because WE choose to be on these apps for an excessive amount of time and we have control over that not them.

Interviewer: Question Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response But personally i don't think developers of social media platforms should be held responsible because WE choose to be on these apps for an excessive amount of time and we have control over that not them.

Interviewer: Question Is it the social media's fault or is it the user's for getting themselves so addicted? and If social media sites value the protection of their consumers, for e.g. privacy, should their mental health come under that protection?

Response: Personally i think it's some what social media's fault. Let's take tiktok for example, if i see a video that i like and engage w/ that video, the algorithm of tiktok will automatically show me more videos that are

similar and i would there for engage more on the app and slowly grow an addiction. I do also think that these social media apps should be held accountable for these addictions because at the end of the day these apps are the reasons millions of ppl around the world develop mental health issues. But then again it's not their faults at the same time because how could these apps like instagram or even tiktok protect us as the viewers from seeing these things that cause these mental health issues?

These apps give us the freedom to dislike something or press the "not interested" button if we see something that we don't like but we choose not to. So i don't think that it's ENTIRELY social media's fault but also the users and viewers

Interviewer: Question And lastly Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: To answer this question, YESSS i think having the ability to track how something makes you feel would show people face on how these apps truly affect them. And being confronted w/ this they might choose to make positive changes to help improve the mental health.

Interview 12

Name: Jamilaa

Age: 19

Gender: F

Country: UK

Transcript:

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Resepense: Okay, so my two main reasons for using social media would be Entertainment and keeping in touch with friends and family. Personally I have family that live in different parts of the world so I feel like social media is the best way for us to maintain contact and keep up to date with each other. As far as entertainment goes, I basically live on tiktok 😊 I find myself being bored most of the time and the thing I'd result to is scrolling through tiktok for hours on end. I also feel as though social media can be used as a form of escape somehow, so whenever I wanna get away from uni stress I'd use social media because its like being somewhere else idk if that makes sense but yeah 😊

Interviewer So this leads me to.. How has it helped you and What makes you keep coming back to Instagram, Do you think you spend too much time on them? Or just enough? (More about self control too)

Response: I feel like it generally just takes my mind off whatever I may be stressed about, a sort of escape from reality I guess. To be completely honest I don't know what it is that makes me keep coming back to Instagram, something about it is addictive but I can't put my finger on it 😊

I don't think I spend a crazy amount of time on Instagram, I'm not on it 24/7 but I definitely do spend more time than I should do, some days more than others.

Interviewer: Haha I understand, Have you ever experienced the negative parts of social media such as any negative mental health thoughts? If so what were they and how did it happen?

Response: Most definitely! It did affect me when I was a little younger. I feel like people on social media give us a very unrealistic outlook on life in general. Things like unrealistic beauty standards, body image, even when it comes to money. I found myself asking myself why don't I look like her? Why don't I have the things this and that person has? Now that I look back I feel so stupid for thinking those things 😊 because now that I know the reality behind social media, the photoshop, the facetune whatever it may be, I realised that everything is not what it seems.

Interviewer So that me me to Question 4: Do you think there is any solution to this growing issue of addiction to social media? E.g. screen time or something you use to keep control etc

Response: I think reducing my screen time would definitely help but also having a way of keeping track of these things could be very useful too. I find myself often disregarding how certain things I see on social media make me feel and over time it just builds up, making me feel anxious and sometimes I just don't know how to deal with it. So if I had a way of writing things down and keeping track of how I actually feel, basically what I hope your app would help achieve, I think it would be very helpful x

Interviewer: Question 5 - Do you think the developers should be responsible?

Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: I do think the developers should be responsible because people are becoming obsessed, and this has definitely taken a toll on people's mental well-being. I don't see much being done to change this tbh, as long as they're making their money they're good, I don't think they are considering the side effects, if you like, of these social media apps.

Interviewer: Question6 – Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: I definitely think that keeping track of these things will help people's mental health a lot because a lot of the time we're too fixated on social media to even take a step back and realise how it is affecting us mentally. And I feel like personally, if I come across something on social media that makes me feel a certain way, I just bury all of that and try not to think about it, which has definitely had a negative impact on my mental health. So most definitely keeping track of this would be very useful and beneficial.

Interview 13

Name: Yara

Age: 19

Gender: F

Country: UAE

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: Alright so, mainly I use all platforms as sort of entertainment and to get my mind off uni work and all that stress, but it tends to backfire and I spend time on it more than I should. I use all sorts of platforms and mainly focus on Instagram and tiktok, I go on Instagram for fashion inspiration, or nails and sort of like beauty inspiration, also I get all of my news from Instagram I think its the place where I follow activism movements and see them represented most so I take part and participate in them on Instagram the most.

As for tiktok, I view it as more of a creative outlet, it's for more than one purpose I believe, I go on it for the comedic content mainly but also for keeping up with trends and what's taking over the social media in the moment whether be it in cooking or fashion or makeup or any of that sort. I also use tiktok to be more exposed to young filmmaking and acting, I think a lot of the talents on there creating films are phenomenal so that is something I love too

Interviewer: Question 2 - How has it HELPED you mental/generally and What social media app is your favourite, Do you think you spend too much time on them? Or just enough? (Just a side note that this is the positive stuff and then I will be covering the negative in the next question)

Response: sure! I do use both tiktok and Instagram mostly out of all platforms, I'd say that I spend a lot of time on both apps, maybe more than I should actually and it ends up being a hindrance to my work more than a distraction. I learned to control my screen time on both apps though and do get off the platforms when I really need to. I love both applications equally actually even if I do spend more time on tiktok rather than Instagram but I think I learn more from Instagram. I do manage to get a lot of new and useful information from both the apps so in a way I think I made use out of them and they're educational (maybe, sometimes, rarely 😊)

I think i was also introduced to a lot of artists, activists, and people who utilise their platforms into something useful and that I would say is the most important thing to me, is to make sure i follow people who will make a change either in the industry or hopefully world wide and but yeah that's mainly it

Interviewer: Question 3 have you ever experienced the negative parts of social media such as any negative mental health thoughts? If so what were they and how did it happen?

Response: I'm more than happy my answers are useful 😊 actually I have had a fairly bad experience with social media I'd say around a couple years ago, when I was around 15 or so I was so consumed in the world of social media and was spending almost all my time on social media, despite that I never posted or put out content I was always a consumer of content, not because I didn't wanna post anything per say it was just the insecurity and lack of confidence that was embedded within my brain from social media itself. Back in like 2016, tiktok was still not a thing and definitely not as big as it is now but what I usually would go on was Instagram, and very excessively actually. And when I noticed I hadn't been doing anything except consuming content that didn't even have a change in my life, like it didn't make me do something or engage or even comment or respond, I was just receiving content without interacting and I fell into this massive hole of just repetitive day to day routine of being on social media and it made me a very mundane person in life. It nearly stripped me of everything I loved doing and spending time with my family and all, and when it got to the worst part of it I sought help. And I was clinically diagnosed with depression, I had MDD, major depressive disorder and my psychiatrist believed it was because of social media, I had regular sessions and took medications for it for almost 3 years. I stopped going to therapy and taking meds because I couldn't afford it anymore and from the begging it was hard to handle, I went through a really good phase but alas I fell back into a horrible episode of depression and I'm trying to self recover now and yeah basically Instagram gave me depression.

Interviewer: Question 4 - Do you think the developers should be responsible?

Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: so in term of media outlets being responsible and accountable i think that in a way they can't really take blame for the hours spent on each platform by their users and the obsession these platforms are causing, however I do believe that certain platform, and especially Instagram, has created unrealistic standards for its users and I think this is what caused the users obsession. I believe that some platforms have allowed the ideals of cruel standards to be normalised and become the new "trend" and had glamourised sensitive conditions (like being diagnosed with mental illnesses or being in an abusive house holds with daddy or mommy issues) I think on this part tiktok had definitely opened up the conversation to whomever to take part and give in their opinion even if they were not part of the trauma per say. I think in this part platforms should be more vigilant on what is exposed to the mass audience rather than popularise any topic that seems to bring more buzz or controversy. so around 16 years old I was clinically diagnosed with major depressive disorder. and though depression doesn't really need a reason to justify it, my psychiatrist told me I had depression because of social media. many aspects contributed to developing the illness but mainly it was the excessive amount of content that I was consuming and the unrealistic standards that I had in my mind because of social media. I had issues with self hatred and lacked confidence in my own mind and that was all embedded through the thought of not being good enough like the people I saw on social media. I didn't try to compare my life to theirs, I just really believed that this is how every normal person looked like and this is what I too should look like, and it turns out that not everything I saw was actually true. I had spent numerous hours consuming content on social media and never produced anything because I was always so insecure of posting on social media in fear of being as good as the other people who posted on there. My access to social media was restricted and I was put on medications to help with my case, it was hard to get medicines because they were all mainly imported and cost way more than my family could afford. My condition slowly started to get better and I had more self control over how I viewed content on social media and also controlled my screen time, I went on 8 months without medications and was doing very well. However tiktok came along and with a new platform who made it even harder to get off, I fell back into a horrible episode of depression that I'm still in, it got so hard trying to get off or even keep up with what's going on on tiktok and all the trends and controversies. I found myself being that consumer who did nothing but watch and continue to recieve content without interacting. I gave up all my hobbies again and started slacking in my uni/school work, I dealt with very harsh suicidal thoughts and even felt like I lost my path in life and believed I had no purpose, losing all hope in living. My family was going through hard times too so that only increased the guilt I had for feeling this way about myself and wanted to be out of their lives so they wouldn't have to suffer because of me. But in the end I went back and helped myself up and I think because it was self recovery that it made me even more convinced I would never fall into this again, because my family couldn't afford therapy or medicines I took it upon myself to help myself out and be the change I was waiting for and Alhamdulillah through Allah's will I fought through it and I still am fighting. I never lost faith throughout since I was first diagnosed and kept going and I think Allah (swt) is the only reason I'm still here and fighting for myself and others. Social media can be very dark and a wormhole thats hard to get out of it but nothing is impossible really. Definitely I'm more than happy to put word out there about the importance of all this. To answer the next question, platforms definitely know that people are becoming obsessed and they know what keeps them on the trending topics and pages or the people that will make them even more obsessed, and I'm saying this from a media chat I had in uni with one of the executive producers of tiktok who did mention that when they notice a certain engagement from people with a tiktok or with a topic circulating tiktok, they push it on every registered user's for you page and this way they get people hooked on the app and kind of keep them eager to check the updates and what not and that I believe is what causes the obsession. It's very tricky when it comes to providing protection on social platforms because from their part these platforms are only trying to get more publicity on whatever topic that's making them go viral so I dont think they take into account whether or not the topic at hand is dangerous or invades their user's privacy, obviously when approached from an ethical perspective it is handled very unethically that any and every subject trending is pushed so that all users have access to it, it may be sometimes invasive of other people's privacy or exposes certain things that they wouldn't want to go vira.

Interviewer: Question 6 – Do you think building an app to keep track would be good?

Response: and to address the app idea I think that is the most brilliant idea I have came across, I think because we are all as a current generation very dependent on digital gear to tell us what to do or what to say or how to

act as social media, so generally having the chance to be on an app that literally helps you distress from other apps is absolutely beneficial and I believe is the perfect approach to such a dilemma

Interviewer: Question 7 - Is it the social media's fault or is it the user's for getting themselves so addicted?

Response: to answer this last part I'd say a shared blame is fair because both parts are contributing in using and popularising these platforms in maybe not the best ways possible. I think it's because social media and applications in general are like a 24 hour thing, it is very easy for the users to be sucked in and be very consumed by all the content being constantly provided non stop, so it might be a hard thing to put a control on their media consumption from their part. However I still believe that it starts affecting users from a really young age and at a point where they don't really grasp the main understanding of mental health and as silly and it sound I believe an age or time restriction should be applied to certain age groups or categories so both parties I think should take part in minimizing the negative impact.

Interview 14

Name: Anika Rahman

Age: 18

Gender: F

Country: UK

Transcript:

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Anika: I started using social media when i was in secondary school, when i was around 13/14, which i personally think was a big mistake as a youngster. around that age i used snapchat and Instagram a lot, and the reason was to keep in touch with friends and family, posting snaps and posts for my own "happiness" if that makes sense.

Around 15 - 17 i didn't have a phone at all, so i was off social media and the toxicity it put on me when i was younger. This was a great way to stable my mental health too. as i was the most vulnerable and easily influenced around that age. this kinda let me grow into a "normal" teenager.

When i turned 18, i decided i'd use social media again, but properly, and i now use social media for entertainment, posting my bakes and foods i create. following many different influencers and just finding my own style from them.

I guess i can say i'm using it in a way where it won't affect me as much as it did when i was younger.

Interviewer: Question 2: How has it helped you and What makes you keep coming back to Instagram, Do you think you spend too much time on them? Or just enough?

Response: So i personally think it's helped me by finding my own identity, i live in a deprived area in northern England and i was born in London, so i think i'm more exposed to the town i'm in that my original roots.

Instagram mainly connects me to London, and it's given me an identity of who i feel most comfortable to be. not sure if i make sense. Andddd yes i think i spend way too much time on instagram. it's a distraction, on average i'd say 4-5 hours on weekdays when in sixth form and home, and weekends 7-8 hours. *this is tracked from my screen time* it's mainly watching reels and following up instagram influencers.

Interviewer: Question 3: have you ever experienced the negative parts of social media such as any negative mental health thoughts? If so what were they and how did it happen?

Response: Erm yes in many ways social media has affected me mentally, there are many influencers out there that are muslims that dress differently to how muslims are supposed to dress not in a bad way. This influenced me and made me feel in way where i wanted to take my hijab off, and to have the "perfect cat eyes" or having clear skin, just mainly living up to beauty's expectations. which wasn't good for me cos i'm that type of person if i like something then i end up trying to be like that, i guess society made me like that 😞 Due to that, it did cut a lot of confidence from me and lowered my self esteem. But i needed to understand that everyone including myself has their own quality and their own element for this earth, i guess that's why we all are different in colour, height, age, culture, no one is identical to the fingertip including identical twins, i could go on forever. and that's what made me understand and valued my own qualities of me. :)

Interviewer: Thank you so much for sharing that part of your journey with me 😊 I really appreciate it Do you think there is any solution to this growing issue of addiction to social media? Like screen time which helps you limit your activity Or turning of notifications etc

Response: i personally think the solution of addiction for social media, comes from within, for example knowing the importance of time, -for those procrastinating.

another solution could be having other hobbies, or maybe being busy with another app that's not social media but it's on your phone and entertaining (not games)

i think turning notifications off is a BIG help!

Personally i think it's all about your own understanding of what it can do to you, on the physical and mental

side of you. If you don't mind me asking, this big project you're working on for an app, is it similar to the apps that helps you track your sleep or like tracking your excersises?

Interviewer: Thank you so much for the amazing response this leads me to... Do you think the developers of platforms like Instagram should be held responsible and accountable?

Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: Ahh right, that makes sense, i genuinely think that's an amazing thing you're doing for people. Especially this generation where social media has become toxic.

I personally think the developers of instagram shouldn't be held responsible for the negative impact on the users. It all depends on the person themselves, and how they take content in. That's why there are many trolls and negative comments on posts and feedback from people, it's all about the mindset and how a person views something. It can also depend on whether you're a pessimist, optimist, sensitive or "don't take things seriously" always depends on the person.

I genuinely think TikTok has become so populated and is an obsession to so many people that it's now making people feel uncomfortable about the different content they show on the *fyp* I hope TikTok are aware. But I don't think they are informed about how people are becoming obsessed, because of the continuous adverts on the TV and on YouTube and celeb features.

Interviewer: Do you think that it's the users fault or the apps fault for people who end up getting so addicted?

Response: I think that the people who become addicted to social media are the ones to blame, it's always about using your time efficiently and how you choose to keep yourself busy. And of course it's about self discipline, knowing the satisfaction of going on social media and stopping that can help you not to waste time.

Interviewer: If social media sites value the protection of their consumers, for e.g. privacy, should their mental health come under that protection?

Response: Yes! I think mental health should be a topic that social media should protect, a lot of people don't understand the ways to take information in and how to understand what they see, if a person is too sensitive with different types of subjects that could be an element into growing or developing the signs of anxiety or depression. The social media apps should be aware with the users ability and how much information they can take when coming across different things online. (Not sure if I answered it the way you wanted 😊)

Interviewer: And lastly Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: Yes I highly agree with having a tracker to see how they feel due to social media, it'll give them a piece of mind with how well they're coping with things online, it will also maybe help the person to understand themselves with how they're feeling maybe if they see improvement it can boost their serotonin levels and keep them more optimistic with seeing results. However the disadvantages to this is that if they see no improvements they may think that there's no way to getting better which could cause slight Damage to their anxiety or depression but if the person themselves want to get better after seeing no improvement they will obviously be willing to help themselves in numerous ways.

Interview 15

Name: Dua Iqbal

Age: 16

Gender: F

Country: Denmark

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: I would say that I use social media for staying connected with my friends and family a lot of the time. But for example with Instagram I use it to get inspired, and sometimes to distract myself from the everyday life. And during the pandemic right now, I use it a lot to inspire people with my thoughts/quotes that I post, because I know it helps a lot of people.

And in general I feel social media sometimes can be the place for me to just get away from everything when I'm not feeling good.

Interviewer: Question 2 How has it helped you and What makes you keep coming back to Instagram, Do you think you spend too much time on them? Or just enough?

Response: Oh yeah sorry I forgot to answer that. Yes I do use TIKTOK.

I think actually what has helped me a lot is the people that I follow and talk to here on Instagram. Some of the influencers for example, I like when they show that they can have bad days too, and not everything is what you see here on Instagram too. And when people share that they are going through something, it makes me feel that I'm not the only one.

I also think that's what makes me keep coming back, because there is so many good people here on Instagram

and I feel that Instagram is a platform where it's easier to share whatever you want to share and speak up. I hope you get what I mean. 🙄 I am definitely guilty of spending too much time on social media... 😊 But I feel like most of the time that I spend on social media, is talking to other people or getting some inspiration. And not just scrolling up and down.

Interviewer: Question 3- have you ever experienced the negative parts of social media such as any negative mental health thoughts? If so what were they and how did it happen?

Response: I definitely have experienced the negative parts of social media.

I feel a lot of the time I forget how much of what for example the influencers post is not what it actually is. Like you have to look like this, be like this, wear this or that to be a part of the society.

Before I used to think about these things so much, that I got to a point where I felt so mentally drained because I felt like I wasn't fitting in. And that was because of social media, they always show us all the things that are perfect and not how it actually is.

I feel like I also got to a point, where I felt I wasn't perfect enough, and my self-esteem was really low. I think it also happened because I was thinking too much about what other people would say or think about me. I've always been a very skinny girl, and I got to a point where I was looking at the people here on social media and thinking that I wasn't fine enough.

Interviewer: Question 4 - Do you think there is any solution to this growing issue of addiction to social media?

Response: I think it's very important to balance the time you spend on social media. Because I feel like everything you see on social media can really get to your head sometimes.

I know that sometimes it can feel like you are missing out if you aren't being on social media all the time. But my solution could be; you could turn off your notifications, because I know the notifications distracts you a lot, and you feel like if you don't go watch that person's story now, or don't check that message now you are gonna feel like you are missing out on something.

My other solution could be; go spend more time with your family or your loved ones, because you will realise when you are in the company of other people, you don't really worry about what's going on, on social media. And for me I don't really feel like screen time works, I mean I look at it and I'm like woow. But again during this pandemic, there is not much you can do.

Interviewer: Question 5- Do you think the developers of platforms like Instagram should be held responsible and accountable? Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: I'm not really sure about the first question, because I don't know if the developers should be held responsible/accountable or not. It's not really their fault, they don't decide what should be posted or what shouldn't be posted. But I would definitely say that Instagram and TikTok' definitely are aware, that people especially us young people are becoming obsessed with it. I don't think they are trying to change it, because in the end they are earning money on it.

Interviewer: My last question is Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: I like this question... 🙄

I do think that maybe if we knew how social media made us feel, we would use it more responsibly. Because then we would know how to kind of „tackle“ everything on social media more.

I personally think if I were able to see how social media made me feel, I would definitely be more „careful“ with how much time I spend and just in general how I would use social media.

I don't know if the response was good enough. ☹️

Interview 16

Name: Saud

Age: 20

Gender: Male

Country: UK

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: I don't use tiktok that much but I usually watch it when friends send me links and videos, Instagram on the other hand I use quite a lot, for mindless scrolling. But for me its slightly business too, so I can follow retailers and gain inspirations as well as spreading awareness for mental health. A lot of my followers know me for posting a lot of mental health related content. I would say the ratio is 9:10 for entertainment to business.

Interviewer: Question 2: How has it helped you and What makes you keep coming back to Instagram, Do you think you spend too much time on them? Or just enough?

Response: I would say that I use twitter more than Instagram, if I am scrolling it won't be for more than a few minutes. I would say I use it for the right amount. I see it here and there, for memes here and there. I think what makes me come back is the different types of information coming out such as a broad range of topics from entertainment to news etc

Interviewer: Question 3 have you ever experienced the negative parts of social media such as any negative mental health thoughts? If so what were they and how did it happen?

Response: that is a big question, and yes, I have had a few experiences on the internet mostly getting a few burner/fake accounts that message me hate. I usually deal with it via blocking users, and I believe that I am a little thicker skinned which helps. When I was younger, I feel like I was more vulnerable to social media affecting my thoughts and moods to a lifestyle I really wanted however as I had grown up more, I realised that majority of what is displayed on the internet is not realistic. A lot of the thoughts would come from comparison, where people compare themselves to unrealistic body types and privileges. It's a lot of under appreciation for self-value and comparing to oneself to others. I also feel like a lot of people end up getting emerged into social media and they end up finding it heart to differentiate real life to online life. An example is how I have a few friends who post their happiest moments however if I were to call them to see how they are doing it is completely different to what they post and reflect online. I think people portray their best selves online, so comparison is the biggest and current issue on Instagram and TikTok.

Interviewer: Question 4 Do you think these trolls could bother other people a lot more than you? Also Do you think there is any solution to this growing issue of addiction to social media?

Response: I think 110% I think trolls can bother other people a lot more than me. It can range from anything from calling people fat or skinny and coming for their body type and I think it can definitely have a huge negative toll on someone a huge example of this is Caroline flack from ITV. A great solution would be to create your own alternatives with physical interactions vs keeping every interaction online. The benefit of seeing people outside is being able to see everything real rather than filters and abnormal bodies etc.

Interviewer: Question 5&6 Do you think the developers should be responsible?

Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: Yes, I think developers are definitely responsible, so they set the algorithms to gain as much interaction as possible. The recent Netflix series called the social media dilemma highlight this issue where developers did not initially have the intention however now the main goal is to maintain interaction with users and exploit originally created functions that were meant for something innocent to end up becoming a money-making scheme. I also believe the screen time lock option isn't the best as users end up extended the time and entering the passcode. It's definitely a sticky situation as you cannot over police social media in terms of limiting freedom. I think the worst parts are the beauty filters which plants the seed of insecurity in some users.

Interviewer: Question 7: what do you think about this: If social media sites value the protection of their consumers, for e.g. privacy, should their mental health come under that protection?

Response: With mental health it is difficult to quantify the data, it is not a tangible thing. To put it in to a contract it may be very sticky, and it may not be great from a business perspective however from an ethical standpoint there is a difference in argument. I know the introduced making likes invisible, but it is the smallest difference, the likes itself became an obsession and the users themselves ended up corrupting the feature. On the consumers behalf people do say its just pixels but it's the comments that play a huge part on someone's mental health as the damage is already done. I would love to be a part of a team that involves in coming up with a solution too. I think something also to consider something from the business side is that no one is forcing the user to use the app however using the algorithm to entice the users to keep using the app. The interactive aspect should remain, but beauty filters play a negative role. Both males and females want to end up looking like the filter. For example, a nose job or facial structure etc and for men it's about cheekbones and jawline.

Interview 17

Name: Aaliya (@kingaalxya)

Age: 20

Gender: female

Country: UK

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: I use Instagram for entertainment, seeing what fashion influencers (dk if that's the right term), sharing memes/videos etc with my family and friends. And, also for education. I follow a lot of Islamic accounts and accounts that talk about brown/south Asian history. I also use Instagram as a reward for getting things done. So once I've done 2 things on my to do list I allow myself a 15 minute break for Instagram and Twitter. I don't have tiktok. The only tiktok content I see is what's on Twitter and Instagram

Interviewer: Question 2 has it helped you and What social media app is your favourite, Do you think you spend too much time on them? Or just enough?

Response: I think my favourite aspect of Instagram is that it brings the world to me. I can go look at someone's profile who's from the Philippines and then go see someone from Cuba in 2 minutes. And you don't get that in real life especially at that speed. The things I see on Instagram, especially in terms of social movements, I don't see that on the news or everyday life as fast as I see it on Instagram. And real life in the uk for me is very

limited very Eurocentric. I can learn about my own culture my religion my interests that don't fit into 'British' society so easily and quickly from Instagram. I can expose myself to so many things simultaneously whereas in real life that's very hard to do. I think that's why it's helped me. It's allowed me to fit in and be comfortable with myself because I'm not the conventional British woman and I don't want to be. Without social media I think I'd feel more pressure to conform and assimilate. I can easily access people who are like me or people I find interesting on social media, I'd say Twitter is my favourite because it's entertainment and news all in one. I think I spend a good amount of time on social media. I have daily limits for all my apps and my overall daily screen time which I think really helps. I think also the fact that I've made my echo chamber and what I'm exposed to very appropriate for myself really helps. I don't follow people who perpetuate unrealistic body standards, Eurocentric standards of beauty, racist, sexists, etc. So whenever I go on social media I most of the time feel happy and comfortable even when triggering things are being discussed. So yesterday my tl on all socials was about Meghan Markle but my tl was filled with people who discuss issues like racism with so much respect and do it very kindly yet still are very constructively informative about their views. But then my time on social media does fluctuate during the week. Weekdays I'm busy with uni but weekends I spend a bit more time on socials but I don't increase my daily screen time limit. I just allocate a bit more time for socials if I want and decrease my time on other things.

Interviewer: Question 2 How has it HELPED you mental/generally and What social media app is your favourite, Do you think you spend too much time on them? Or just enough? (Just a side note that this is the positive stuff and then I will be covering the negative in the next question)

Response: I think one thing that always brings me back to Instagram is familiarity. I know how to use it, how it works, etc. I've been using it since 2014 I think and I'm aware of how things are pushed here like ads, the algorithm, etc if that makes sense. I made Facebook for uni and I have no idea how to use it nor do I want to cuz I associate Facebook with millennials and older people and generally racists idk why but I just do! I see Instagram as something for me, for people my age, and I see Instagram as not (as) racist as Facebook. I think I have control over Instagram. I do have late nights where I'm scrolling for a while but I can always snap out of it as I feel like I'm aware of how much time I'm spending on it. I think that's more because I'm quite particular about my screen time. It irritates my soul if I spend more than 6 hours a day on my phone so that's always at the back of my mind when I'm on my phone. I think Instagram and Twitter have really helped with my mental health. Alhamdulillah I've never had a big issue with my mental health. Most mental health campaigns in the UK imo are very white focused. It focuses on white issues and demonises poc and their cultures. Positive mental health is seen as a thing only white people know how to do and they must teach the ethnics cuz we're backward (I have very strong opinions about this lol) but these campaigns ignore the fact that poc cultures and minority religions are big advocates of mental health. Islam, Sikhism and Hinduism all incorporate mental health and its importance. It's spoken about in different ways as these religions are very old and the mental health jargon we use is very modern but essentially they say the same thing. Cultures from Africa, Asia, etc also prioritised mental health before colonialism and the reduction of its importance is an ongoing consequence of colonialism. Instagram and Twitter allow this perspective to shine. They show this history how non white countries and cultures and religions do value mental health and that's so much more relatable for me than hearing a white person telling me my culture is toxic (even if it is) because they don't ever consider the colonial background Also I found it so ironic that white campaigns advocate for mental health like itvs campaign yet let horrible people like Piers Morgan and Katie Hopkins to have or once have a platform where they come out with such bs which seriously impacts peoples mental health. So I can't take them seriously. It seems like they're just doing it as a PR thing to see relatable and modern and whatnot. I prefer getting mental health info and help from Instagram and Twitter as the conversation is so much more broad and diverse and goes to the root of the issue. We can't talk about mental health or try to fix it without knowing the roots of ourselves, our environment, our culture, religion, etc. People on the internet are much more nicer than real life mental health organisations that only cater to certain demographics

Interviewer: Question 3: have you ever experienced the negative parts of social media such as any negative mental health thoughts? If so what were they and how did it happen? if you feel like you may have already covered this we can lead to: Do you think there is any solution to this growing issue of addiction to social media?

Response: When I was younger when I first started using social media I experienced some of the negative parts. I used to follow a lot of celebrities and influencers who I really wanted to look like but I was too lazy to ever exercise or anything. But it did at times impact my self esteem but social media also highlighted the existence of this negative aspect. I would see so many threads of twitter explaining angles, photoshop, how people have

different body types so you shouldn't aspire to look like others, etc. And since then I've been very picky about who I follow. I think I'm one of the lucky few who's had that kind of experience so I might be biased but I think whatever negatives you see on social media there's positives that can help rectify the issues caused by the negatives like in my case

I think more knowledge about social media can help. Especially explaining how what you see isn't always reality but that applies to some cases cuz if you see someone getting killed like the blm movement that's not distorted at all. My secondary school were really on it with e learning. They taught us how to be safe online, how to not let things impact your self esteem as they're not always real but also see the positivity of social media. I think more knowledge and understanding would deffo help. But also I think age restrictions need to be implemented better. Children below 13 shouldn't have social media but age limits are really easy to work around. I don't have any stats but I think children and young adults get more addicted to social media and face more of the negative impacts so they need to be protected more. And social media platforms need to take responsibility and monitor what gets posted and discourage addiction somehow.

Interviewer: Question 4 Do you think there is any solution to this growing issue of addiction to social media?

Response: I think the best solutions will have to come from the top down otherwise solutions we as the consumers try to implement will never last in the long term because at the end of the day the owners and producers of social media have the power. They manipulate these platforms so we do become addicted. I watched the social dilemma documentary and it scared me. How are can we be put up against a computer that is doing what it's doing by itself?? Idk if that makes sense I can't remember the technological terms they used but the documentary basically said social media analyses everything you like or see and push more of that to you to get you addicted. Even though I limit my usage and am very picky about who I follow I still see ads. My explore page is filled with things that can impact your mental health and that's not something I can control. It shouldn't be my responsibility to have thick skin to not be effected.

Interviewer: that's such an insightful response thank you so much, I agree about limiting and still seeing ads too. Do you think the developers of platforms like Instagram should be held responsible and accountable?

Should the user be equally responsible?

Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: I think especially through cookies because I think (I could be wrong) cookies are the main cause of you seeing ads etc that are tailored to you that can further addiction not just to social media but the ads and whatnot also encourage fast fashion, western standards of beauty etc. But then on the other hand these platforms could say how do we make money then? Mental health should definitely be under that protection but I feel like it's never implemented properly. It's usually mentioned as a pr thing to seem pro mental health. But to fully be pro mental health you have to deal with racism, sexism, etc as they contribute to negative mental health but then that would impact the platforms as racist, sexist content gets popular because it's so controversial which generates more money for them. I think ethical guidelines are often vague to reduce responsibility so idk if this method of being accountable is even productive. But then what's the other option?

The gov doesn't do much especially when these platforms contribute a lot to the economy

Values of protection should exist but I don't think they do much they're very surface level because it won't fix or get rid of the deep rooted causes of bad mental health

Interviewer: and lastly, Do you think that it's the users fault or the apps fault for people who end up getting so addicted?

Response: I think more blame is on the app but to a lesser extent the users (or their parents) may be at fault too (excluding children, vulnerable people, etc)

Interviewer: Thank you so much for the responses btw !!! they were amazing and have helped me with building an app

I just had a quick question and wanted to know what you thought if that's okay

Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: You're welcome! and I think so because personally once I started keeping an eye on my screen time I started a daily time limit and it made me feel better getting actual things done instead of spending hours scrolling

Interview 18

Name: Rukaya Rahman

Age: 18

Gender: Female

Country: UK

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Response: I use social media most of the time for news around the world, for learning new things and also entertainment. And specially rn, I use it to have fun and move my head around from the situation we are in.

Interviewer: Question 2: How has it helped you mentally or in general and What social media app is your favourite, Do you think you spend too much time on them? Or just about enough?

Response: Social media had helped me learn a lot. Specially what happens around the world, I've learnt a lot. I do see this as a positive way. Also some memes, some post that appear on your feed makes you smile. That's really helpful specially if someone is having a bad day. I feel like now, social media there are people who show the reality and it defiantly helps with self confidence. My favourite social media app is Instagram. Spending time, my limit is two hours but I do spend a lot of time, it gets really addictive and I don't end up doing other things. I like the layout of Instagram, it's easy to go come one account to more accounts. Stories, post highlights, the layout looks really pleasing. I think that is also one of the factors why I'm i like coming back to Instagram.

Interviewer: Question 3: have you ever experienced the negative parts of social media such as any negative mental health thoughts? If so what were they and how did it happen?

Response: I'm going to say mostly no, however there are times which I realised...Theres a lot of happy moments you see on socials, which is the reality because no one is going to post bad parts. So there were times when I felt left out, but not having much fun as other people were

But I got my self back and said thank god so this happens rarely.

Interviewer: Question 4: Do you think there is any solution to this growing issue of addiction to social media?

Response: I do use the screen time do limit some apps, which does help at times. This helps a lot but again I spend more than the limit. I don't use any other apps to keep track, but I think it would be really useful if there was a brief summary of what I did during my day. That way I'll be able to reflect and see how productive I was and the positive things I did.

Interviewer: Question 5: Do you think the developers should be responsible?

Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Response: Yes, I think the developers are responsible and that they are very well aware of people becoming obsessed with these apps. I don't think they want to change that, instead maybe attract more people towards using these apps but again some developers like Instagram did build in app limits.

Interviewer: I'm very interested in your standpoint about the following for the app im making... Do you think this responsibility could be reflected through value of protection for their consumers e.g. privacy, should their mental health come under that protection? Or ethical guidelines primarily set?

Response: In my opinion ethical guidelines would be the right way to take this responsibility

Interviewer: Thankss and my last bit was about my app, Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Response: It's a great way to know what we did when we were feeling low, and how our days were spent. It also gives us a solution to see how productive we have been. That way we will be able to control how much we spend on our phone

Appendix F: Thematic analysis of Interviews

Thematic Analysis of Interviews

Words to analyse: 20,306

Structure: Semi structured interview

Dates: carried out over one week from the 9th of March – 12 of March 2021

Total number of participants: 18

Female: 16

Male: 2

Age group: 15-28 N, N

Countries: UK, UAE, CANADA, KUWAIT, Denmark, Bulgaria

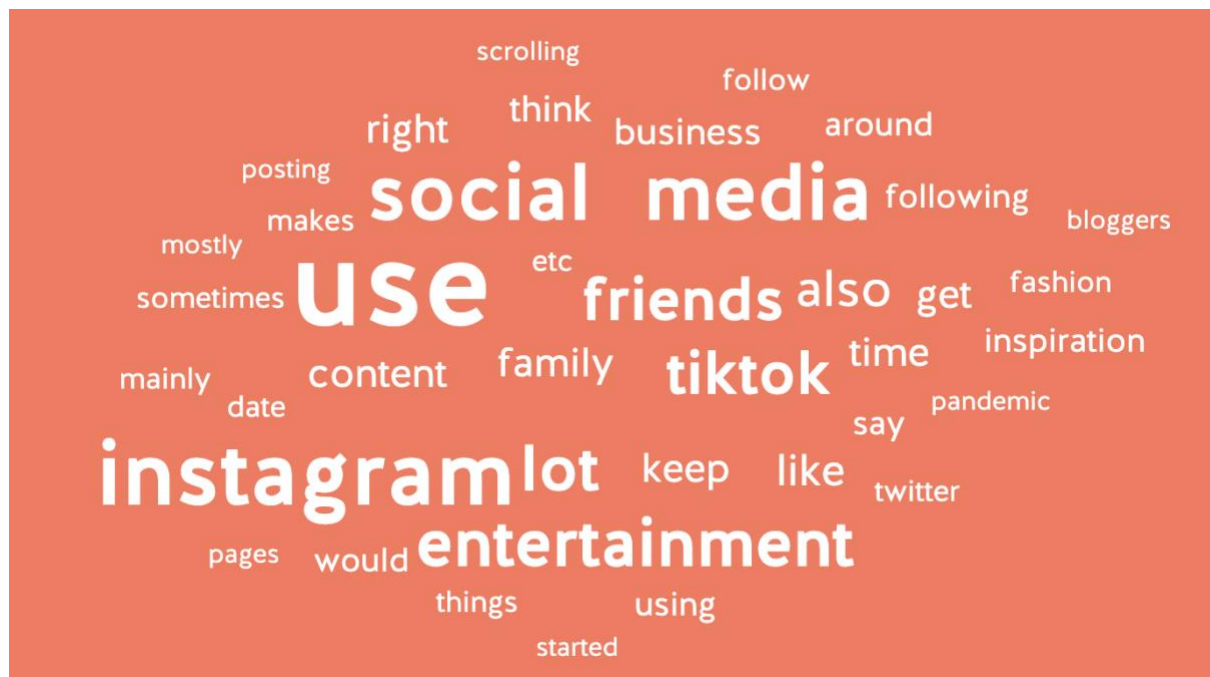
Website used: <https://databasic.io/en/wordcounter/>

Interviewer: Question 1: what do you use social media for? (Especially during the current pandemic)

Frequency of words:

- Entertainment – 16
- Friends – 14
- Family – 8
- Time – 8
- Business – 7
- A lot – 15

Word diagram:



Preliminary codes:

Entertainment, friends, family, business, time.

Interviewer: Question 2: How has it HELPED you mental/generally and What social media app is your favourite, do you think you spend too much time on them? Or just enough?

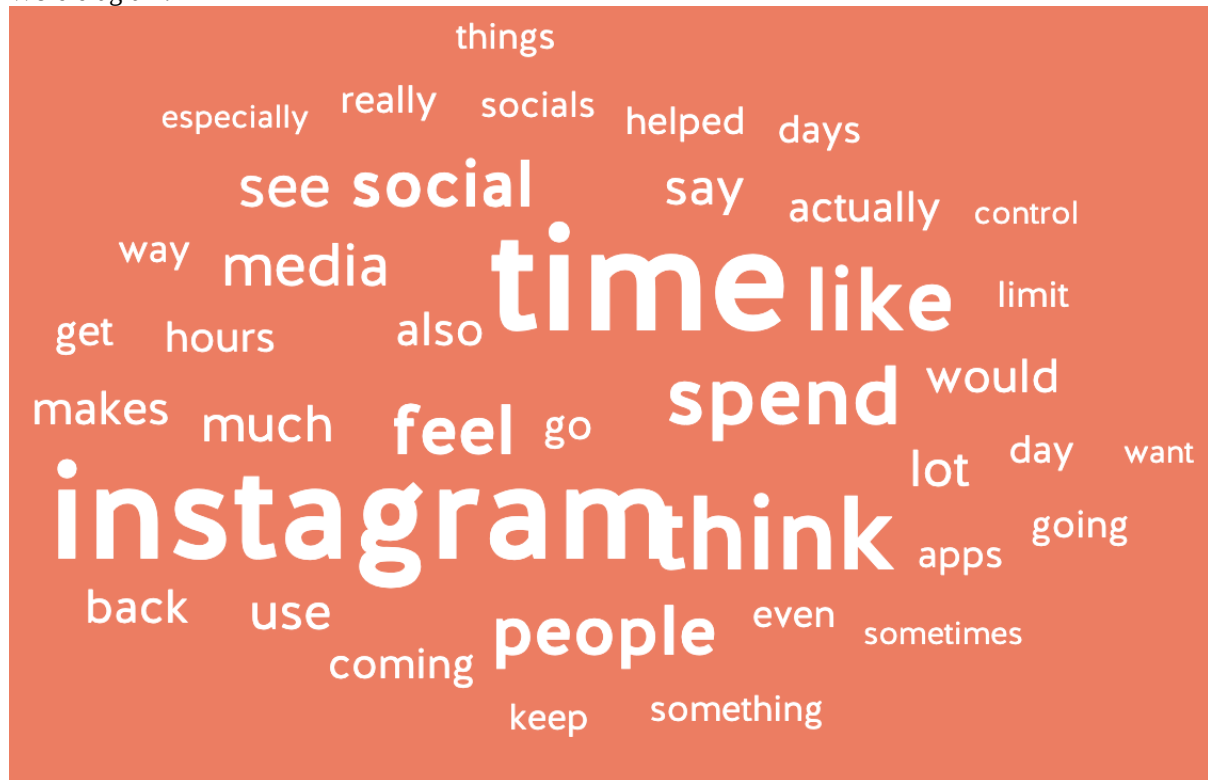
Frequency of words:

- Time – 34
- Spend – 17

- Lot – 9
- Don't – 11

Preliminary codes: certainty, spend

Word diagram:



Interviewer: Question 3 Do you think there is any solution to this growing issue of addiction to social media? E.g. screen time or something you use to keep control etc

Frequency of words:

- Time – 21
- Think - 18
- Negative – 6
- Don't – 11

Word diagram:

Frequency of words:

- Social media - 29
- Time - 13
- Definitely – 9
- Don't – 20
- Don't think – 13
- Impact - 10
- Excessive amount of – 4
- Trying to change- 3
- Personally, I don't - 3

Word diagram:

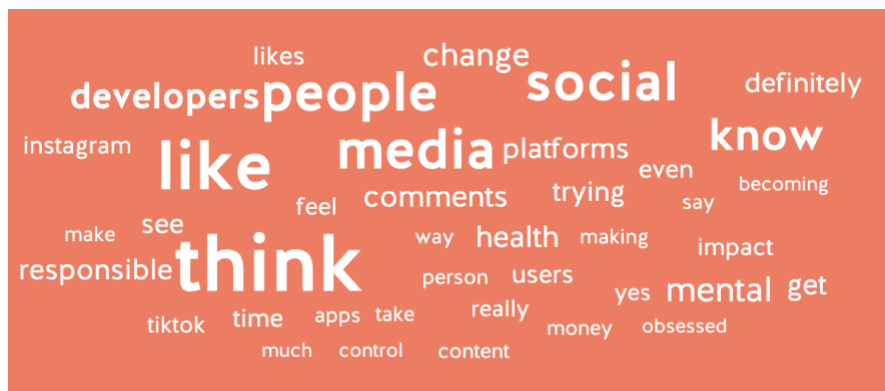


Interviewer: Question 6 Do you think sites such as TikTok and Instagram are aware that people are becoming obsessed? Do you think they are trying to change this?

Frequency of words:

- Change – 15
- Comments – 14
- Health – 14
- They are – 14
- Trying to – 12
- Trying to change – 6
- Don't - 18

Word diagram:



Interviewer: Question 7 Do you think if people could track how social media makes them feel they would be able to responsibly use it better and see an improvement in their mental health?

Frequency of words:

- Social media - 16
- I think – 11
- On social – 7
- How much – 4
- We are – 5
- It would – 5
- A lot – 6
- Definitely – 7
- Better – 7

Word diagram:



Appendix G: Figure 1, Flow chart

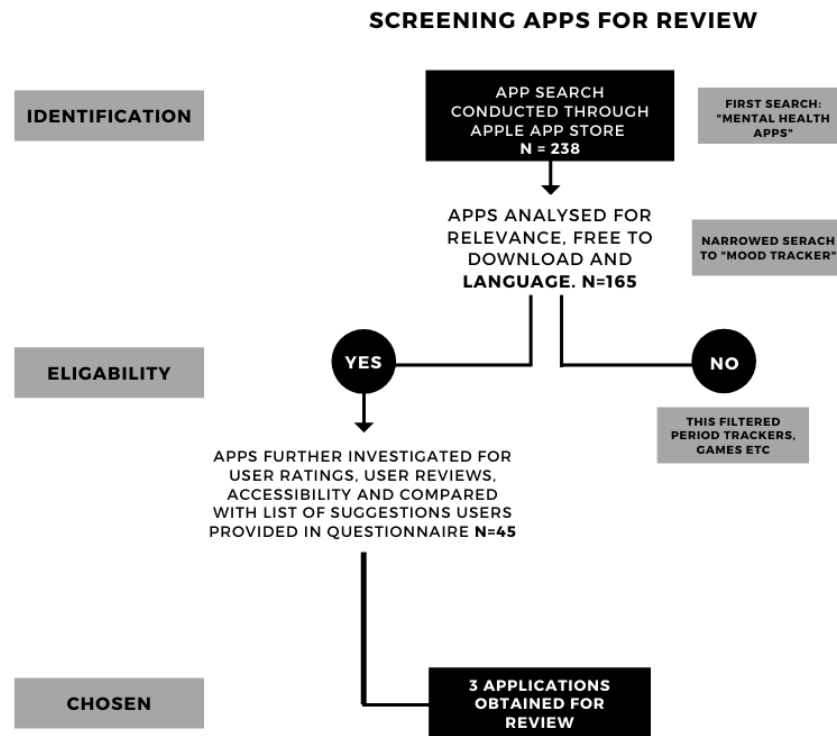


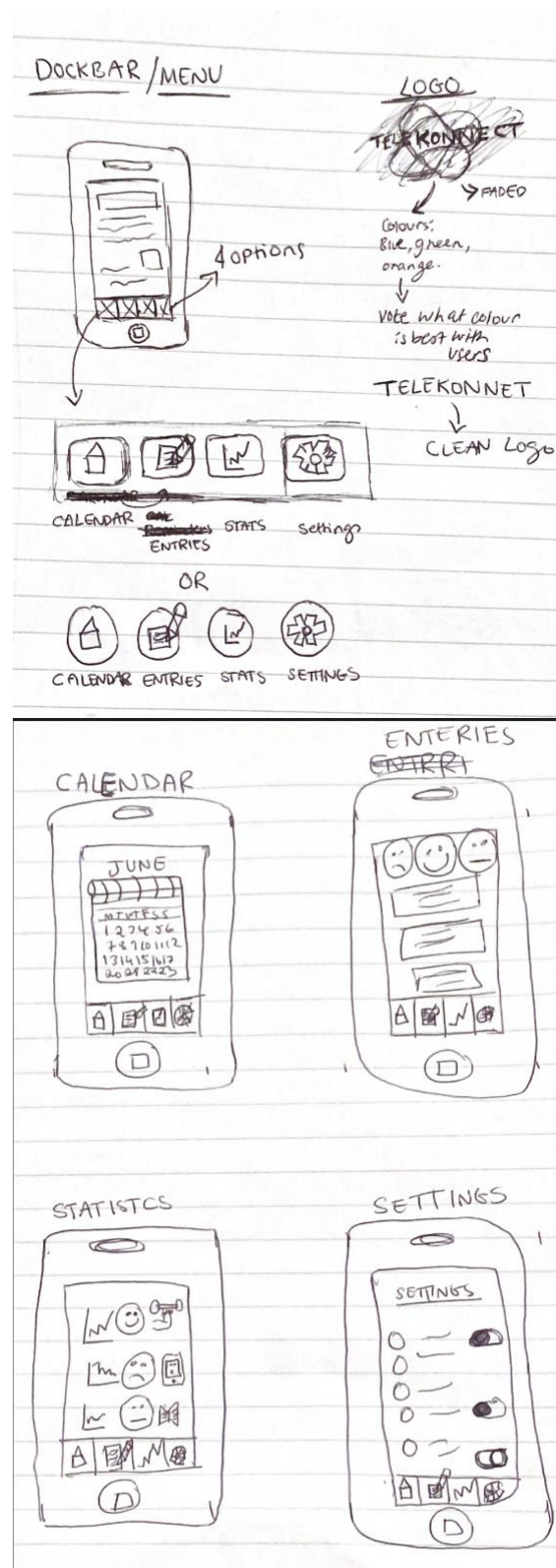
Figure 1 showing a flow chart of screening apps (see appendix F)

Appendix H: Table 22

App	Mood assessments /Cognitive procedure	Sedentary Behaviour required to use App?	Reminders	Insights	Symptom tracking	Sleep tracking	Community	In-app purchase	Cost	App store Rating
Flo	Yes, Concentration, self-analysis, Noting, Static	Yes	Yes	Yes (weekly-yearly)	Yes	Yes	Yes, onlineannon community	Subscription service but free features/trial available	Free to download Annual: £29.49 Monthly : £5.99	4.7 (No2 health and fitness)
Head space	Yes, Focused attention, self-analysis, Static	Yes	Yes	Yes	No	No	Yes, online community of advisors	Subscription service but free features/trial available	Free to download Annual: £29.99 Monthly : £9.99	4.8 (No 8 health and fitness)
Mood notes	Yes, Passive observation, introspection , Concentration, Static	Yes	Yes	Yes	Yes	No	No	Subscription service but free features/trial available	Free to download Annual: £38.99 Monthly : £9.99	4.5

Table 13 shows summary of reviewed applications for chapter 4

Appendix I: Figure 2, 2.1 and 2.2



Appendix J: User requirements Table

Table 23 showing the user requirements table (chapter 4)

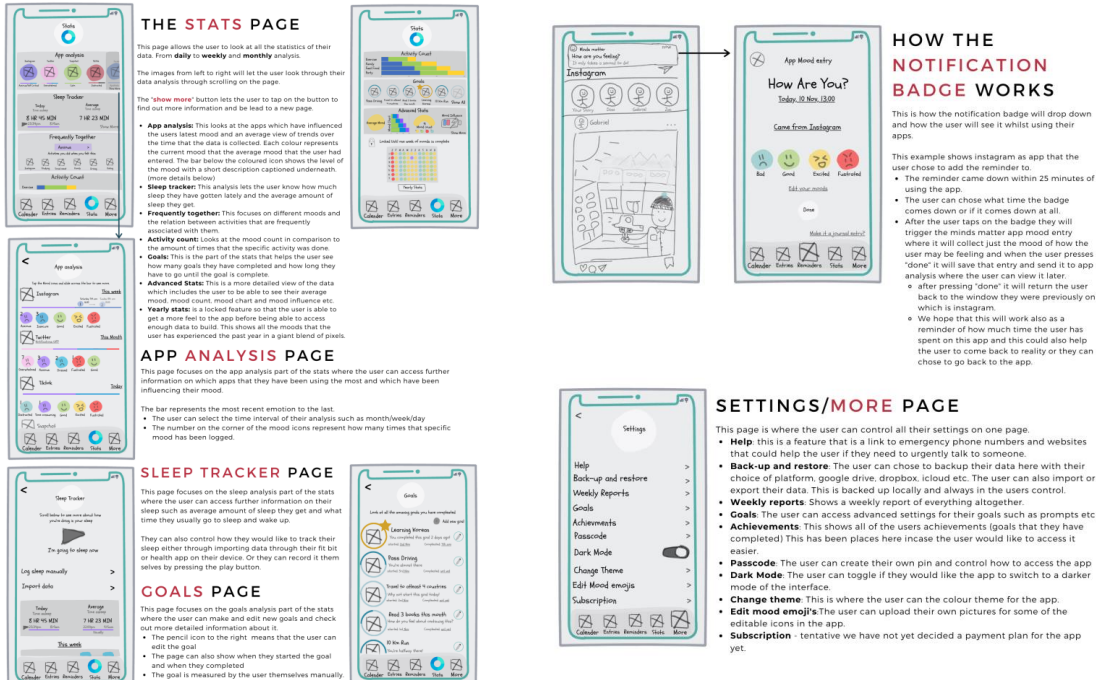
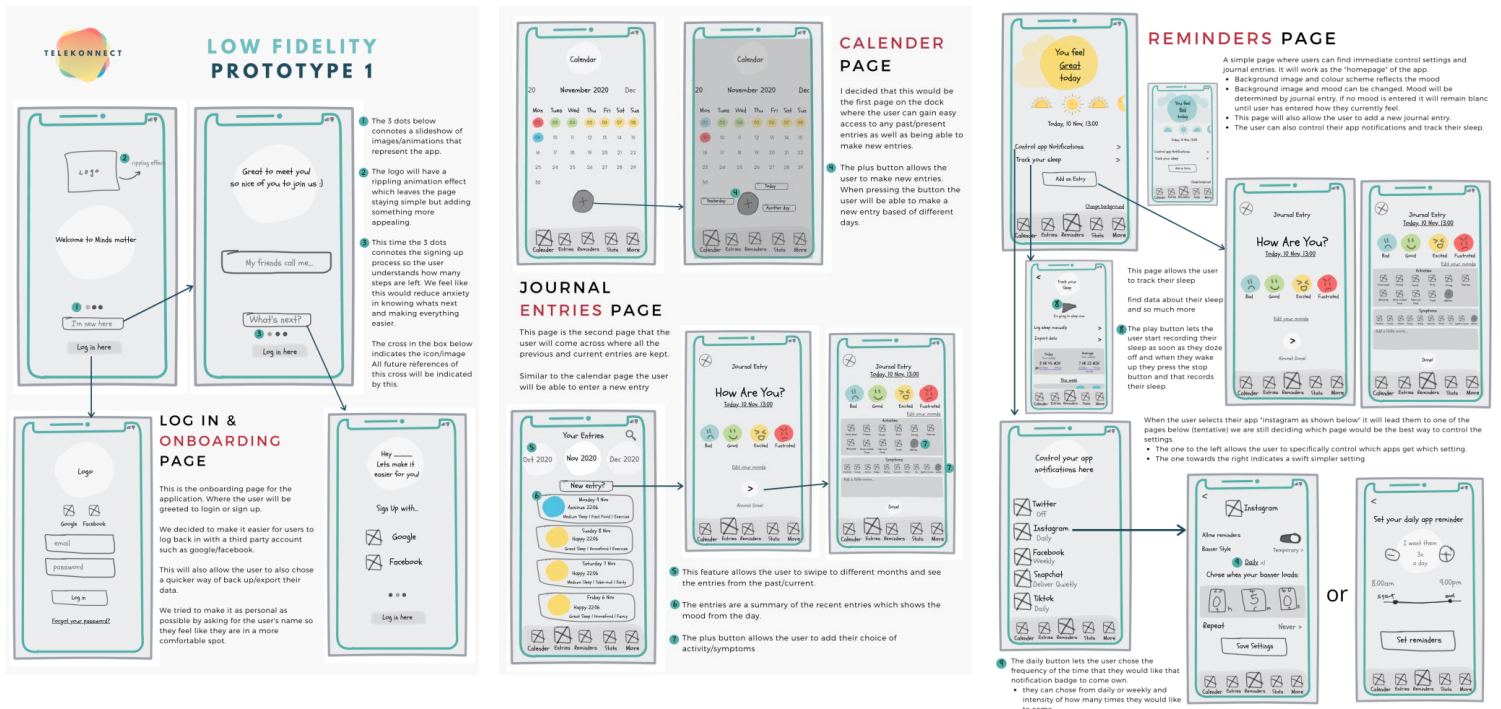
Priority	Requirement/Testing	Explanation
Essential	The user needs to be able to keep their personal information and data backed up in cloud form securely	To protect the user's privacy and guarantee that they can retrieve their data at any time, the app will be configured to allow them to back up their data to their preferred private cloud medium. Transparency will be preserved by telling the user that the data will be saved locally on their device until they feel comfortable to backup it to the cloud. This guarantees that the user has full autonomy over their data. This requirement is derived from recognising the sensitivity of using an app that stores personal data. The Data Protection act highlights importance of this ethical issue, and the legal consequences if the user's data is not rightfully protected (Data protection GOV.UK).
Essential	The user will be able to customise what apps they would like to be enabled to receive the push notification for	It is crucial for the user to be able to select which applications they want to receive push notifications from, otherwise it may seem limiting in terms of what they want to keep track of. This requirement's functionalities will feature toggle buttons that allow the user to pick which applications to enable. The notifications page where they can select will also contain a text box where the user can enter the time interval for the app to release the push notifications. This feature was motivated by personal experience with an iPhone; looking at how we can pick which applications have access to the camera and how we can send notifications through the notification bar. In carrying out the setup of choosing push notifications, the user not only gains control, but this also encourages the user to build new habits and increase the frequency of data that they enter the app. Wohllebe confirms in a 2020 study that the frequency of push notifications are a central part for activating and binding app users thus, highlighting the importance of push notifications (Wohllebe, A., 2020).
Essential	The user needs to be able to schedule the time for the notification drop bar	This criterion focuses on allowing the user to schedule their own drop-down notification bar. For example, while the user is using another app, such as Whatsapp, this app will cause a notification bar to appear on the screen. The notification bar will ask the user how they are feeling, to which the user will respond either by dismissing the bar completely if it is inconvenient timing, or quick fill how they are feeling by holding on to the notification or pressing the notification to launch Telekconnect. The user may decide and customise the time at which the bar lowers down, where they can pick their own scheduled period. For example, 15 minutes. This will assist users in keeping track of any extraneous factors that may be affecting their mental health outside of their normal activities. The significance of this need is represented in the customisable functionality, as well as the production of advanced stats. Recognising that this requirement is acquired through control and visual stimulation of personalisation of settings, Li emphasizes that badges motivate users to contribute more to all types of activities (Li, Z., 2012).
Essential	The app must be able to successfully coexist alongside other apps	It is important that Telekconnect can operate when the user is using other apps. One of the primary features focuses solely on how much time the user spends on each app. If this is not executed properly, there is a danger that software will be

		disrupted. This assumes that the user would always have other programmes running in the background. However, a potential issue that must be investigated is how the app would recognise when the user has opened a new app if it was previously loaded as a tab, and whether the time intervals can be converted to a clock setting at certain periods. In a 2014 study it was reported that “the most frequent complaints were functional errors, feature requests, and app crashes” (Khalid, H., 2014). This highlights a potential issue in which, when the programme is built through the Apple/App Store, there may be numerous issues that must be dealt with, whereas it may operate more smoothly on Android.
Important	There must be a simple sign up/sign in option so that data can be backed up and accessed anywhere and anytime by the user	This criterion enables the user to maintain their personal information linked to a certain account. The requirement will concentrate on making it simpler for the user to login through third-party services such as Facebook/Google during the onboarding and login process. This was inspired by the notion that it is a basic accessibility need for the user to be able to login with ease and efficiency. Briant Wentz stresses the importance of having an accessible sign-up process through a study conducted on people with disabilities who struggled due to inaccessibility (Wentz, B., 2014).
Important	Ability to track the days of the user’s personal emotional health journey	This requirement encompasses one of the main parts of the app. In addition to the user being open whilst journaling their moods, simple interactive buttons will allow them to register how they feel from a day-to-day basis. At the end of each week a summary will be formed where the user can track all their moods, and what they did when they felt that emotion. Depending on how long the user has been keeping track this will follow through to a monthly and yearly summary. This provides the opportunity for the user to look at the bigger picture and witness how many days they felt happy/confused/sad/angry etc. “Affective responses are induced by design-based factors like visual aesthetics. Objective and subjective measurements are necessary for capturing emotions.” (Bhandari, U., 2017).
Important	The user must be able to access other health apps for mental health benefit	The significance of this criterion derives from the concept that the user should be able to seek assistance when they need it, allowing the user to reach out for an extra hand during a challenging period. For example, if the user has noticed a rise in the frequency of unpleasant days, this may prompt the need to speak with someone about it; the app may give support before the user even needs to seek for it. When the programme detects an increase in negative feelings, it will display this information on the settings page or the homepage. This makes it easy for the user to receive the assistance they require with the simple press of a button. Cognitive behavioural therapy is a form of talking therapy that many psychologists use to help patients. Hofmann concluded that the efficacy of CBT for anxiety disorders was consistently strong, which further exhibits the importance of talking to medical professional when needed and engaging in forms of talking therapy (Hofmann, S.G., Asnaani, A., Vonk, I.J.J., Sawyer, A.T., Fang, A., 2012). This need was derived from personal experience with prior mental health applications that lacked a guide for useful links and contact numbers, as well as inputs made by users themselves during the research process. (Second questionnaire see appendix C).
Important	User will be able to use a Pin-lock to keep data safe	To ensure that only the user has access to their own data, they must be able to produce their own pin code. The evidence in a 2016 research study supports this requirement when concluding that PIN users take longer to enter their codes, but commit fewer errors than pattern users (Harbach, M., De Luca, A. and

		Egelman, S., 2016). The importance of this criterion is on the privacy and sensitive data at hand; the user must feel comfortable when using the app and having a pin lock provides an additional security precaution in the event that someone may have unauthorised access to their smartphone. The app will also include a customisable pin lock that allows the user to set their own pin, as well as other forms of security such as touch-id or face-id, depending on the device. This requirement was influenced by the security options in online banking apps; when we use internet banking, we are either asked for our password, Touch-ID, or Face-ID to safeguard and secure our information.
Non-Essential	The user must be able to set and track their own achievements and goals	Tracking personal objectives enables the user to form habits and accumulate accomplishments. This is a non-essential requirement that focuses on self-care and reflection of the user. This concept arose from reviewing different research and studies such as, Kelley demonstrating personal objectives reflecting a positive impact on students mental health. (Kelley, C., Lee, B. and Wilcox, L., 2017).
Non-essential	Doesn't feel too invasive when the user is navigating other applications on their device	For this criterion to be effective, the user must be greeted with the appropriate language and vocabulary. For example, when users are asked "Currently, how are you feeling?" via a drop-down notice, it should seem reassuring rather than intrusive. This requirement emphasises a calm approach that reinforces the user's desire for comfort rather than causing an inconvenience. It is recommended to use a positive visual framing in nudging people away from privacy-invasive apps (Choe, E.K., Jung, J., Lee, B. and Fisher, K., 2013).
Attractive/Non-essential	The user must be able to access Journal entries via the calendar interface	This requirement examines how the user will be able to utilise the app's key features to reflect on and monitor their day. The process will take the shape of a calendar system, with the user being able to zoom in and out to browse around various dates. This direction was influenced from the user's desire for capacity as well as the incorporation of a calendar's familiarity into daily records. Thus, Making it easy-to-use and accessible. The calendar page will be available from the app's main navigation dock, making it immediately accessible to the user. Enabling zooming in and out of functions, incorporates accessibility for users who may be visually impaired. Toggle buttons with vibrations will be introduced to help users understand what they are selecting. Kevin Lufkin deployed the use of a calendar interface and found it was a productive way for users to visually track their activity and progress (Lufkin, K., 2014).
Attractive/Non-essential	The user will be able to put in symptoms, weight, water intake and any other measures of healthcare when inputting diary entry.	Although this requirement appears to be significant, it focuses on just providing the user with more information that they may wish to submit that they have not previously. The requirement examines healthcare measures in order to provide the user with data that can assist them in tracking any red flags/progress in relation to their mood. Looking at water consumption, for example, could assist in tracking down why the user has been feeling more tired than normal recently. This criterion is concerned with the context of the statistics that they will get at the conclusion of each week/month/year. Banta reported "increasing levels of psychological distress were generally associated with lower mean servings of fruits, vegetables, and water" thus, tracking this data is compulsory for bettering overall health (Banta, J.E., 2019).
Attractive/Non-essential	User will be able to customise colour themes and chose night mode	This condition focuses on making the user feel at ease while selecting their colour choices for the app. The ability to

		personalise the software enables the users to feel more at ease in their safe space while also addressing control. Recognizing that this demand is obtained through control and visual stimulation by setting customisation, this implements accessibility for the application and conforming to varied settings for any circumstances the user may have. Infact, Kaya and Epps demonstrated the power of colour customization by demonstrating that the colour blue has a tremendous influence on mood, enhancing the calming qualities of nature (Kaya, N. and Epps 2004).
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Appendix K: Figures 3.1-3.5 Low fidelity 1



Appendix L: Informal low fidelity user testing Interviews

Date conducted: 15th of March 2021

Participants: Joyna, Adib and Ridhwaan (3)

Structure: Unstructured/informal but controlled setting

Description: Participants will be asked about their thoughts on the

Hypothesis: Users will show a difference of opinion when evaluating the design of the low fidelity

Findings:

Non-directional hypothesis was met.

Joyna: I think the design of the application is great and I would love to see the next phase of the app

Adib: It would be really cool to see if we could edit the different moods instead of having strictly for moods

Joyna: I think the notification system is a great idea but for some users it could be invasive

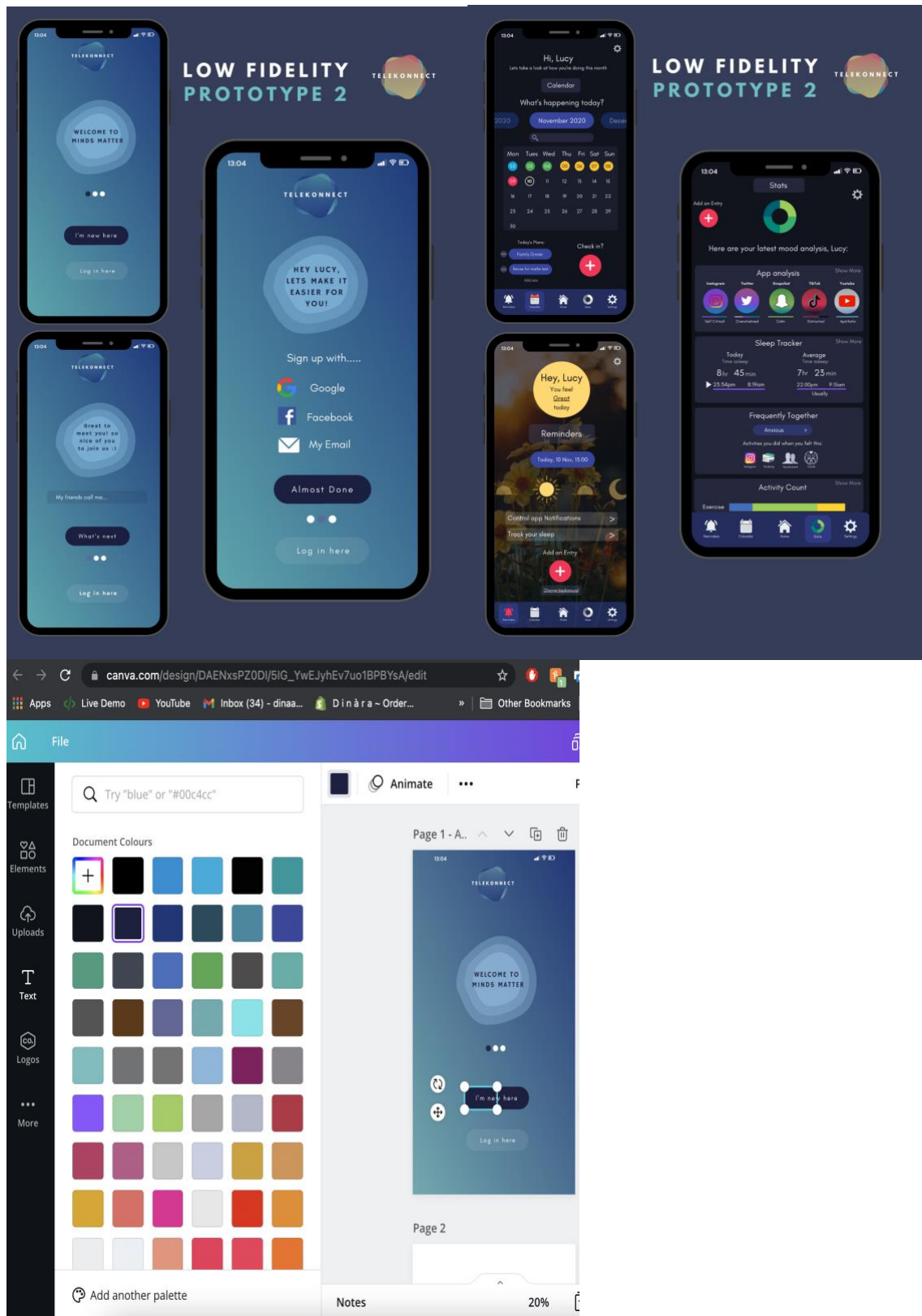
Ridhwaan: The stats page is really informative, but this could be overwhelming to the user?

Ridhwaan: I believe the overall design is great, but it is really confusing having so many buttons at the bottom with no actual homepage. Even though the reminders page is simple I think it would be really cool if the application could have a simple homepage so that the user isn't invaded with lots of information when they join the app.

Adib: The logo of the app is really attractive and promotes a contemporary outlook

Ridhwaan: I really like the feature where the user can log in with a third-party option, although it's really common, it remains a thoughtful feature that will make the users life significantly easier.

Appendix M: Figures 4.1, 4.2, 4.3 Low fidelity 2



Appendix N: Figures 5.1 – 5.17 High fidelity

End product Figma Url:

<https://www.figma.com/proto/mLOzIMosPU2KNO7gWyRie2/Telekconnect-App?node-id=807%3A2101&scaling=scale-down&page-id=1%3A4&starting-point-node-id=807%3A2101&show-prot-sidebar=1>

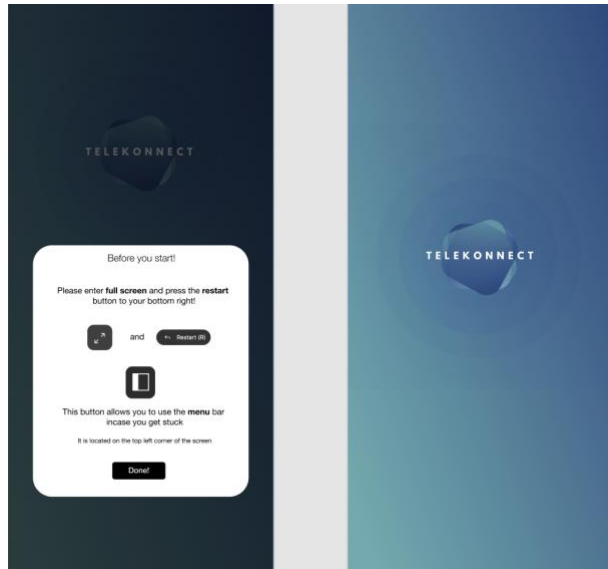


Figure 5.2 Shows the boarding pages for high-fidelity prototype

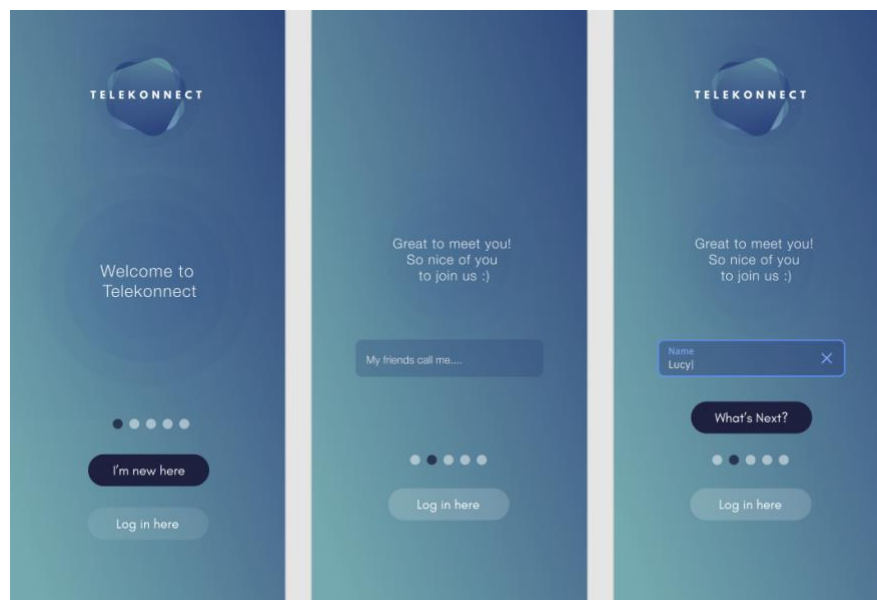


Figure 5.3 displays the boarding pages for the high-fidelity prototype

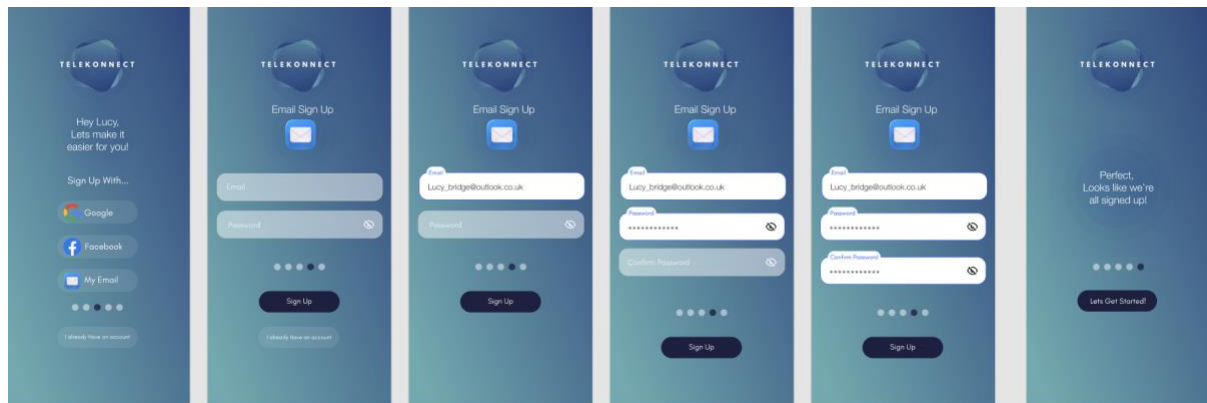


Figure 5.4 Shows the sign-up pages for the email option high-fidelity prototype

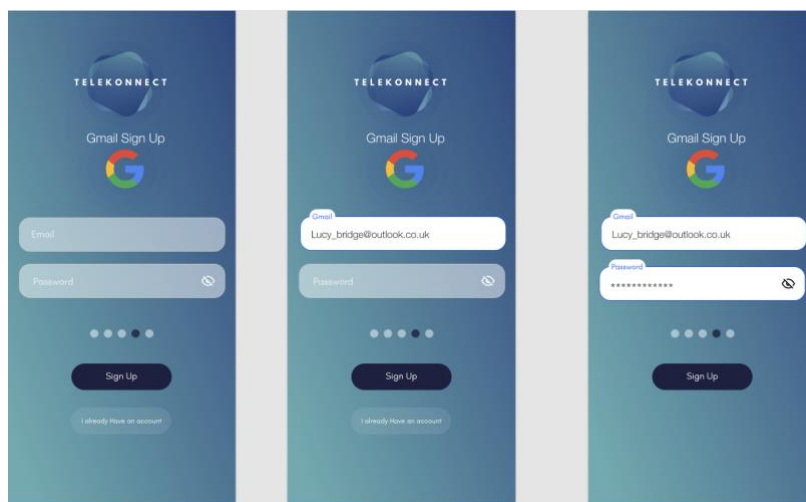


Figure 5.5 Shows the sign-up pages for the Google option high-fidelity prototype

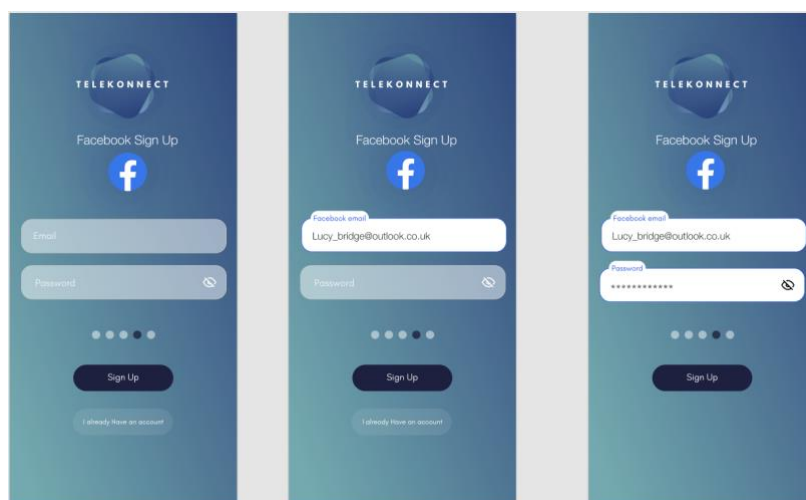


Figure 5.6 Shows the sign-up pages for the Facebook option high-fidelity prototype

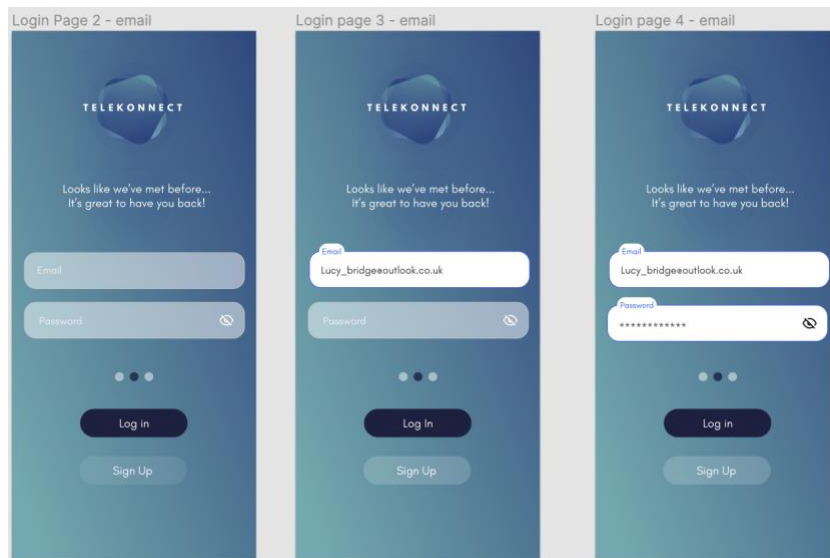


Figure 5.7 Shows the Log in pages for the email option high-fidelity prototype

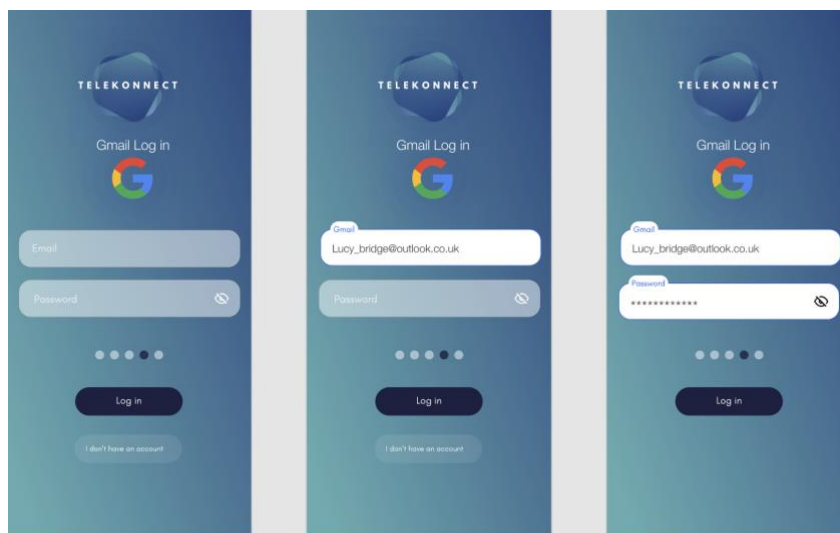


Figure 5.8 Shows the Log in pages for the Google option high-fidelity prototype

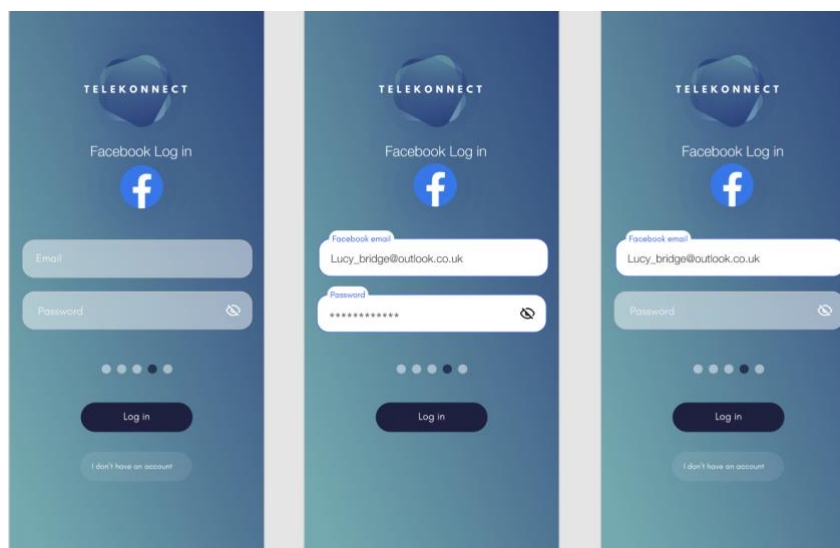


Figure 5.9 Shows the Log in pages for the Facebook option high-fidelity prototype

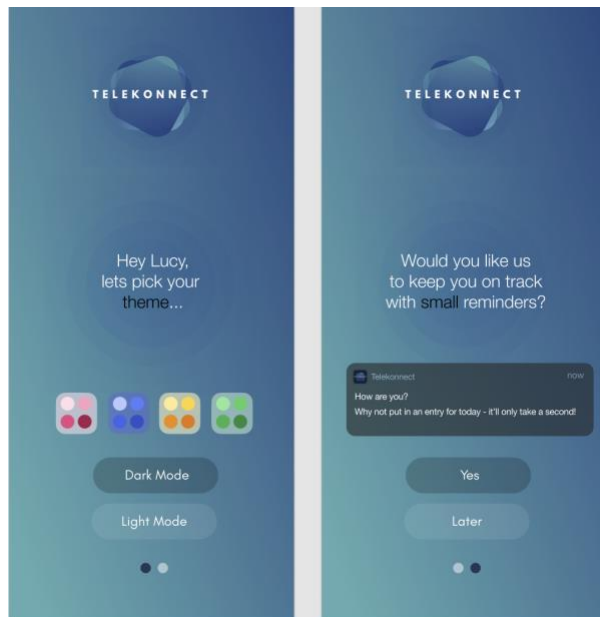


Figure 5.10 Shows the customisation options during onboarding high-fidelity prototype

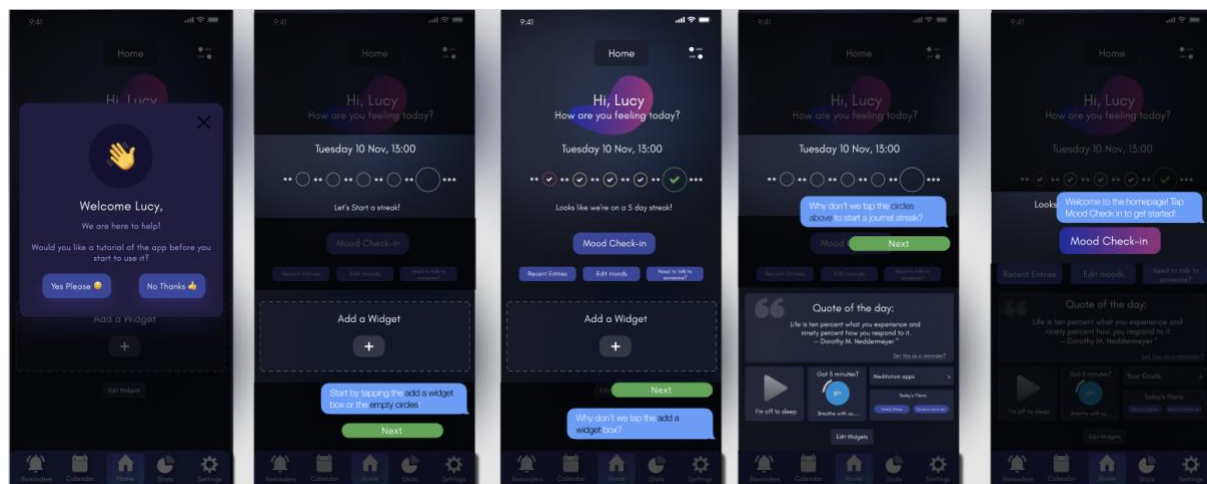


Figure 5.11 Shows the tutorial for high-fidelity prototype

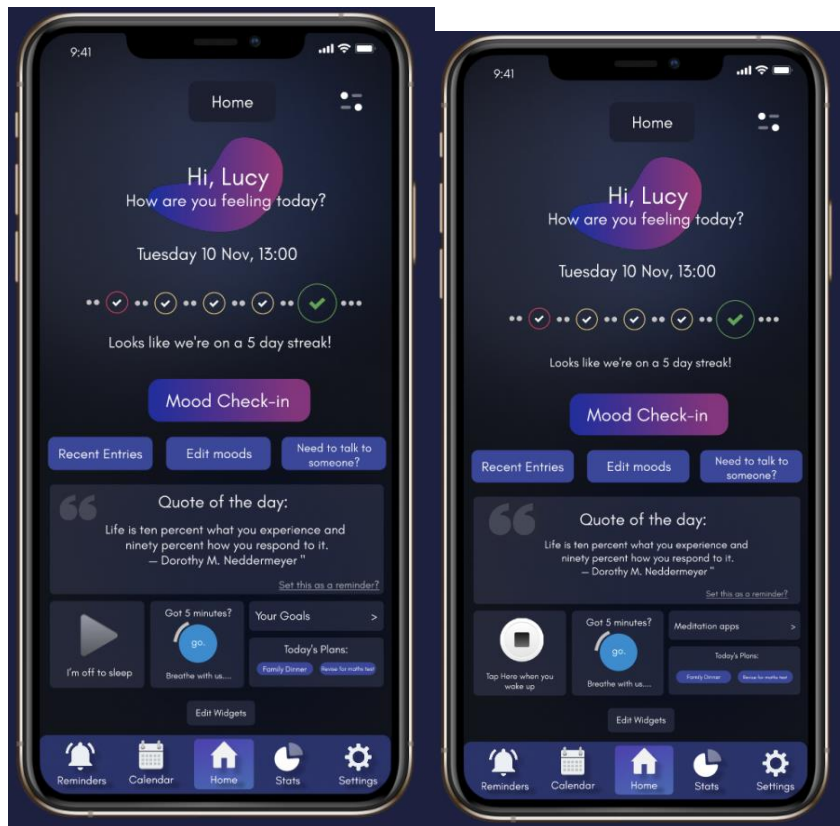


Figure 5.12 Shows the homepage for high-fidelity prototype



Figure 5.13 Shows the 4 main homepage buttons (mood check in, recent entries, edit moods, talk to someone) for high-fidelity prototype



Figure 5.14 Shows for reminders page high-fidelity prototype

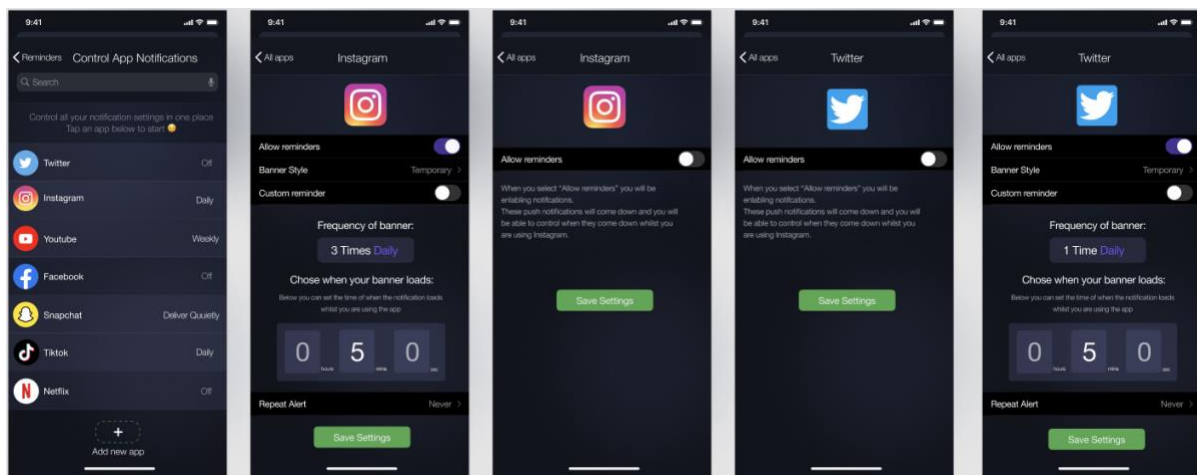


Figure 5.15 Shows for reminders page high-fidelity prototype

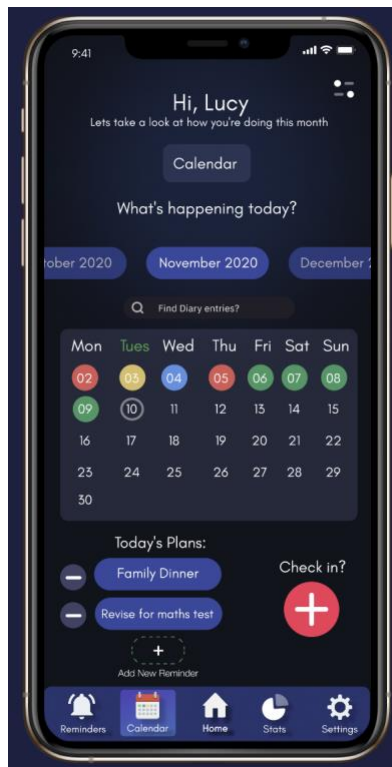


Figure 5.16 Shows calendar page high-fidelity prototype



Figure 5.17 Shows stats page high-fidelity prototype

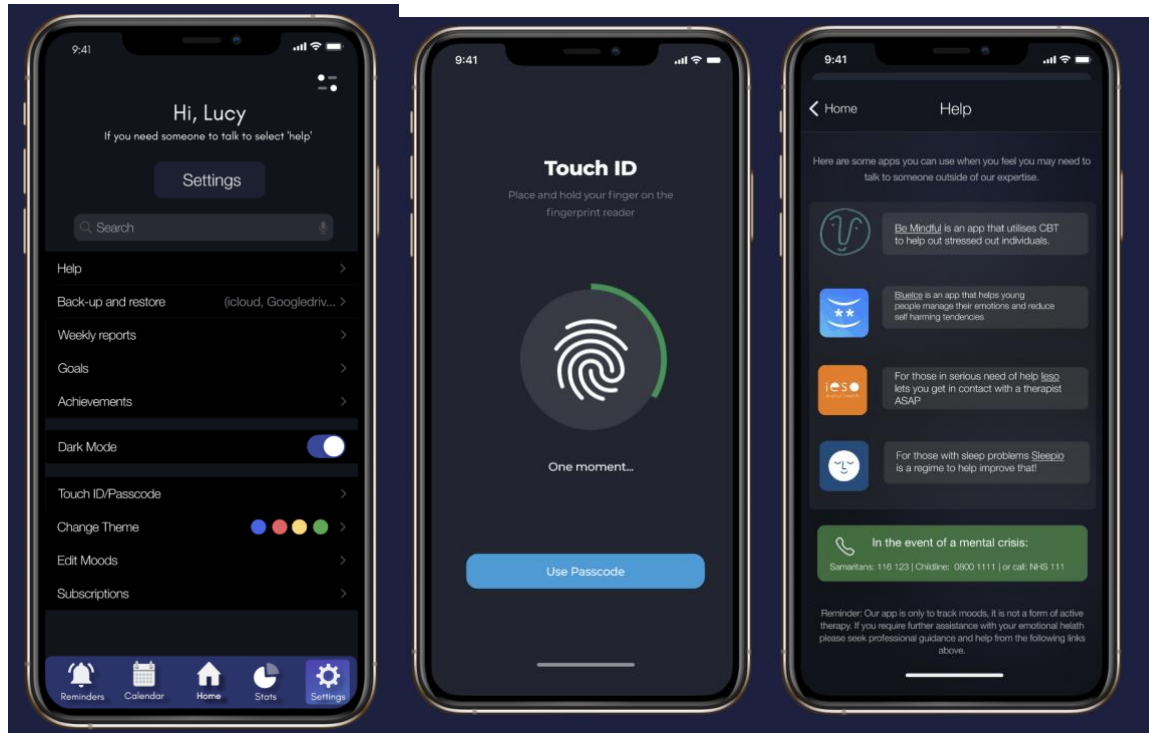


Figure 5.18 Shows the settings page high-fidelity prototype

Appendix O: Testing Tables

System Testing							
	Condition/ Page	Purpose of page	Accessed via:	Testing button with functional description	Successful ?	Improvement	Functions for outside of app implementation in near future.
1	Before you start screen	This is the initial page that the user sees after installing the app and loading it.	Loading the app	1 Button Done button -> when clicked it leads user to App load screen.	Yes	N/A	N/A
2	App Load screen	Loading screen between the “before you start” and boarding page.	Clicking Done button on the “Before you start screen”	Tap anywhere to direct to the next page Function: Ripple effect	Yes	N/A	N/A
3	On boarding page 1	Welcoming the user	When user taps anywhere on loading screen	2 buttons: I’m new Here ->leads user to sign up on boarding page Log in Here -> Leads user to Main Login page Function: Ripple effect	Yes all.	N/A	N/A
4	Onboarding page 2 - Sign up	Page for user to fill in their name	When user clicks “I’m new here” on the first onboarding page	2 buttons: “My friends call me” button - > leads user to onboarding page 3 Log in here -> leads user Main to login page Function: Ripple effect	Yes all.	N/A	Not related to outside of app but, when app is implemented, it will allow user to type in their own name.
5	On boarding page 3	Page for user to fill in their name	After user selects “insert name” box.	2 buttons: What’s Next -> leads user to Main boarding page Log in here -> leads user Main to login page Function: Ripple effect	Yes all.	N/A	N/A
6	Main boarding page	Page offering sign up options	Loads after user selects “what’s next” on the previous onboarding page.	4 buttons: Google -> Leads user to Google sign up page Facebook-> Leads user to Facebook Sign up page My email-> Leads user to email sign up page “I already have an account”-> leads user to Main log in page Function: Ripple effect	No, Google and Facebook missing sign up pages. Everything else yes.	Implement google and Facebook sign up/login pages	N/A

7	Email sign up page 1	The page where users can Sign up using their email	When user selects "My Email" button	3 Buttons: Email box – > loads predetermined email and sends user to next page Password box -> load error box Sign up - > load error box "I already have an account"-> leads user to Main log in page Function: Ripple effect	Yes all.	N/A	N/A
8	Error Box (Overlay)	To notify the user to fill in correct details.	All log in and sign-up pages	1 Button: Close button -> closes overlay	Yes	Depending on error show appropriate text.	N/A
9	Email sign up page 2	The page where users can Sign up using their email	After user selects/inserts email box	2 Buttons: Password box -> load next page Sign up - > load error box	Yes all	N/A	N/A
10	Email sign up page 3	The page where users can Sign up using their email	After user enters/clicks a password box	2 Buttons: Confirm passwords box -> load next page Sign up - > load error box	Yes all	N/A	N/A
11	Email sign up page 4	The page where users can Sign up using their email	After user clicks/confirm the password	1 button: Sign up - > load last onboarding page	Yes	N/A	N/A
12	Main Login with page	Prompted after "I already have an account" or "Log in here"	After user selects "I already have an account" or "log in here" button located on first onboarding page	4 buttons: Google -> Loads user to google log in page Facebook -> loads user to Facebook log in page My email-> Loads user to email log in page "I don't have an account" -> loads user to main sign up page Function: Ripple effect	Yes all	N/A	
13	Email log in page 1	The page where users can Log in using their Email account.	After user clicks Email log in button	3 Buttons: Email box – > loads predetermined email and sends user to next page Password box -> load error box Log in - > load error box	Yes all	N/A	N/A

14	Email log in page 2	The page where users can Log in using their Email account.	After user selects/inserts email box	2 Buttons: Password box -> load next page Log in -> load error box	Yes all	N/A	N/A
15	Email log in page 3	The page where users can Log in using their Email account.	After user enters/clicks a password box	1 button: Log in -> load last onboarding page	Yes	N/A	N/A
16	Google log in page 1	The page where users can Log in using their Google account.	After user clicks Google Log in button	4 Buttons: Gmail box -> loads predetermined email and sends user to next page Password box -> load error box Log in -> load error box "I don't have an account" -> loads user to main sign up page Function: Ripple effect	Yes all	N/A	N/A
17	Last onboarding page	Indication page that user has completed all onboarding and sign up	After user has completed any sign up/log in process	1 button: "Let's get started" -> Loads custom theme page Function: Ripple effect	Yes	N/A	N/A
18	Custom theme page	Where the user can select their preferences for their colour theme	Accessed after user selects "Let's get started" button on last onboarding page	6 buttons: Pink colour theme -> Load next page Blue colour theme -> Load next page Yellow colour theme -> Load next page Green colour theme -> Load next page Dark Mode -> load next page Light mode -> Load next page Function: Ripple effect	Yes all	N/A	N/A
19	Notifications turn on page	Page for users to select their preference before formally loading the app	Accessed after user select any option on the custom theme page	2 buttons: Yes -> Load next page Later -> Load next page Function: Ripple effect	Yes all	N/A	Load devices notification settings
20	Tutorial page 1	Guide for users on how to use the	Accessed after user selects yes/later	2 buttons: Yes Please -> Load next page	Yes all	N/A	N/A

		app/homepage functions.	option on the notifications turn on page at the last stage of onboarding	No thanks -> Load Homepage 1			
21	Tutorial page 2	Guide for users on how to use the homepage functions.	Accessed after the user selects "yes please" on the first tutorial page	3 buttons: Add widget -> Load next page Empty circles -> Load next page Next -> Load Homepage 1	Yes all	N/A	N/A
22	Tutorial page 3 – add widget	Guide for users on how to use the app/homepage functions.	Accessed via: tutorial page 2 – "add widget" or "next"	2 buttons: Empty circles -> Loads next page Next -> Empty circles tutorial page (4) Functional widget	Yes all	N/A	N/A
23	Tutorial page 4 – empty circles	Guide for users on how to use the app/homepage functions.	Accessed via: tutorial page 2 – clicking empty circles or "next"	2 buttons: Add widget -> Loads add widget tutorial page (4) Next -> Loads Homepage	Yes all	N/A	N/A
24	Homepage 1	Homepage of app	Accessed via dock bar.	11 buttons: Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Mood check in -> Loads mood check in overlay Recent entries -> loads recent entries page Edit moods -> Loads edit moods page Need to talk to someone -> Loads help page Play button widget -> load homepage 2 Today's plans -> Loads calendar page Dock bar buttons (4 buttons load different menu pages)	Yes all	N/A	N/A
25	Home page 2	Homepage of app Accessed via dock bar.		11 buttons: Settings button located top right -> loads quick access overlay located top right -> load quick access overlay	Yes	N/A	N/A

				Mood check in -> Load mood check in overlay Recent entries -> load recent entries page Edit moods -> Load edit moods page Need to talk to someone -> Load help page Play button widget -> load homepage 2 Today's plans -> Load calendar page Dock bar buttons (4 buttons load different menu pages)			
26	Quick access overlay	Providing the user with quick access to settings.	Can be accessed on every page	4 buttons: Sounds toggle -> allows user to turn sounds on/off Dark mode toggle -> allows user to alternate between light and dark mode Close button -> closes overlay -> closes overlay -> closes overlay Lock and close app -> closes overlay	Yes	Implement actual pin lock on app	
27	Mood check in overlay	Where user can submit a mood entry	Can be accessed on all menu pages	10 buttons: Date-> loads calendar overlay Confused -> loads confused emoji overlay Energetic -> selects energetic emoji self-critical - > loads self-critical emoji Calm - > loads calm emoji Anxious- > loads anxious emoji Cancel - > closes overlay Make it a journal entry instead - > Loads journal entries overlay Close button -> closes overlay	Yes	Implement edit moods button	N/A
28	Calendar overlay	Where user can select different dates when inserting a journal entry	Can be accessed via mood check in overlay or journal entries page	1 button: Selecting current date -> closes overlay	Yes	N/A	N/A
29	Journal entries page	Allowing the user to make a more detailed journal entry	Accessed via user selecting "make it a journal entry"	14 buttons: Date-> loads calendar overlay Confused -> loads confused emoji overlay	Yes	N/A	N/A

				Energetic -> selects energetic emoji self-critical - > loads self-critical emoji Calm - > loads calm emoji Anxious- > loads anxious emoji Done -> closes all overlays More parameters -> Loads journal entries – more parameters page Back button -> returns user to previous page -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)			
30	Journal entries page – more parameter	Allowing the user to make a more detailed journal entry	Accessed via user selecting “More parameters”	14 buttons: Date-> loads calendar overlay Confused -> loads confused emoji overlay Energetic -> selects energetic emoji self-critical - > loads self-critical emoji Calm - > loads calm emoji Anxious- > loads anxious emoji Done -> closes all overlays Back button -> returns user to previous page -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	N/A	N/A
31	Recent entries page	Where user can view most recent entries.	Accessed via homepage button only.	3 buttons: Add entry – > loads mood check in Back button -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay	Yes	Should be accessed via stats analysis page too. Implement scrolling function	N/A

32	Edit moods page	Where user can edit their mood emojis/theme	Accessed via homepage button only.	2 buttons: Back button -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay	Yes	Should be accessible via mood check in overlay. Implement mood buttons. Let the user create at least one emoji.	N/A
33	Reminders Page	Where the user can modify app notification settings, track sleep, and personalise page background	Accessed via dock bar.	8 buttons: Control app notifications -> Loads control app notifications page Track your sleep -> loads track your sleep overlay Add entry -> loads mood check in overlay Change your background -> loads change your background overlay Dock bar buttons (4 buttons load different menu pages) Delay effect -> changing of suns indicating change of time	Yes	N/A	N/A
34	Reminders Page sun change	Where the user can modify app notification settings, track sleep, and personalise page background	Accessed via dock bar.	8 buttons: Control app notifications -> Loads control app notifications page Track your sleep -> loads track your sleep overlay Add entry -> loads mood check in overlay Change your background -> loads change your background overlay Dock bar buttons (4 buttons load different menu pages) Delay effect -> changing of suns indicating change of time	Yes	N/A	N/A
35	Control app notifications page	Where user can modify notifications for selected apps	Accessed via Reminders page	3 buttons: Twitter -> loads twitter toggle off page Instagram -> loads Instagram toggle on page	Yes	N/A	N/A

				Reminders -> Loads reminders page			
36	Instagram page Toggle on	Where user can adjust Instagram app notifications	Accessed on control app notifications page when user selects "Instagram" app	3 buttons: Allow reminders -> loads toggle off Instagram page Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	Yes	N/A	N/A
37	Toggle off Instagram page	Where user can adjust Instagram app notifications	Accessed via toggling of/on button on Instagram page	3 buttons: Allow reminders -> loads Instagram page toggle on Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	No, allow reminders button needs to be implemented. Yes to everything else.	Fix error and lead user to view changes that they have made, implement allow reminders button to change back	N/A
38	Twitter page Toggle off	Where user can adjust Twitter app notifications	Accessed on control app notifications page when user selects "Twitter" app	3 buttons: Allow reminders-> loads toggle off Twitter page Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	Yes	N/A	N/A
39	Toggle off twitter page	Where user can adjust Twitter app notifications	Accessed via toggling of/on button on Twitter page	3 buttons: Allow reminders - > loads twitter toggle on page Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	Error – when "allow reminders" toggle is clicked, loads wrong page (loads Instagram toggle off instead) Yes to everything else	Fix error	N/A
40	Saved control app notifications page	Showing user that they changed the settings of Twitter/Instagram.	Accessed via: Twitter toggle on page	3 buttons: Twitter -> loads twitter toggle on page Instagram -> loads Instagram toggle off page Reminders -> loads reminders page	Error, user should be able to click twitter button. Instagram button should show updated change that user has made Yes to everything else.	Implement other apps with save function like Instagram and twitter.	N/A

41	Change your background overlay	Allows user to change the background of the reminders page.	Accessed via select "change your background button" on reminders page	2 buttons: Save -> closes overlay Close button -> closes overlay	Yes	N/A	N/A
42	Calendar page 1	User can preview all their entries in the form of a calendar as well as input a daily schedule. User can also check in with their mood.	Accessed via dock bar.	7 buttons: Remove button for family dinner -> Loads calendar page 2 Check in -> loads mood check in entry overlay Settings button located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	Implement a better way to record schedule that isn't so manual	N/A
43	Calendar page 2	User can preview all their entries in the form of a calendar as well as input a daily schedule. User can also check in with their mood.	Accessed via dock bar.	6 buttons: Check in -> loads mood check in entry overlay Settings button located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	Implement add button to bring back previous page.	N/A
44	Stats analysis page 1	Page summarises all data that has been collected by user input which is presented through a variety of widgets.	Accessed via dock bar.	7 buttons: Settings button located top right -> loads quick access overlay Add an entry? -> loads mood check in overlay Sleep tracker button – Loads sleep tracking page with play button Dock bar buttons (4 buttons load different menu pages) Scroll function	Yes	N/A	N/A
45	Stats analysis page 2	Page summarises all data that has been collected by user input which is presented through a variety of widgets.	Accessed via scrolling up on page	7 buttons: Settings button located top right -> loads quick access overlay Add an entry? -> loads mood check in overlay	Yes	N/A	N/A

				Sleep tracker button – Loads sleep tracking page with play button Dock bar buttons (4 buttons load different menu pages) Scroll function			
46	Track your sleep page	Providing user with analysis on their sleeping trends	Accessed when user selects sleep tracking widget on stats analysis page/ when user selects stop button on track your sleep toggle stop page.	Play button -> loads “track your sleep page “ with stop button	Yes	N/A	N/A
47	Track your sleep page toggle stop	Providing user with analysis on their sleeping trends	Accessed when user selects play button.	Stop button -> loads “track your sleep page” with play button	Yes	N/A	N/A
48	Settings page	Providing a list of preferences users can modify.	Accessed via dock bar.	7 buttons: Help -> Loads help page Touch ID/Passcode - > loads touch Id pass code page Settings button located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	Implement dark mode toggle	N/A
49	Touch ID Page	Shows user how registering their touch ID would work	Accessed via – settings page only	Use passcode -> loads settings page	Yes	Implement Back button -> returning user to previous page	N/A
50	Help page	Where user can access help if they require it.	Accessed on: homepage/settings page	Settings -> loads settings page (home page help page has different page where user can select back to homepage button instead of this one) External links ->	Yes	N/A	Load call line/website on device when user taps phone number.

Table 24 shows figures collected from an in-depth system testing evaluation

USER TESTING TABLE

User Testing						
	Condition/ Page	Purpose of page	Accessed via:	Testing button with functional description	Successful?	User suggestions
1	Before you start page	This is the initial page that the user sees after installing the app and loading it.	Loading the app	1 Button Done button -> when clicked it leads user to App load screen.	Yes	N/A
2	App Load screen	Loading screen between the "before you start" and boarding page.	Clicking Done button on the "Before you start screen"	Tap anywhere to direct to the next page Function: Ripple effect	Yes	N/A
3	On boarding page 1	Welcoming the user	When user taps anywhere on loading screen	2 buttons: I'm new Here -> leads user to sign up on boarding page Log in Here -> Leads user to Main Login page Function: Ripple effect	Yes all.	N/A
4	Onboarding page 2 - Sign up	Page for user to fill in their name	When user clicks "I'm new here" on the first onboarding page	2 buttons: "My friends call me" button -> leads user to onboarding page 3 Log in here -> leads user Main to login page Function: Ripple effect	Yes all.	N/A
5	On boarding page 3	Page for user to fill in their name	After user selects "insert name" box.	2 buttons: What's Next -> leads user to Main boarding page Log in here -> leads user Main to login page Function: Ripple effect	Yes all.	N/A
6	Main boarding page	Page offering sign up options	Loads after user selects "what's next" on the previous onboarding page.	4 buttons: Google -> Leads user to Google sign up page Facebook-> Leads user to Facebook Sign up page My email-> Leads user to email sign up page "I already have an account"-> leads user to Main log in page Function: Ripple effect	Yes	N/A (previous system testing improvements were met)
7	Email sign up page 1	The page where users can Sign up using their email	When user selects "My Email" button	3 Buttons: Email box -> loads predetermined email and sends user to next page	Yes all.	N/A

				Password box -> load error box Sign up - > load error box “I already have an account”-> leads user to Main log in page Function: Ripple effect		
8	Error Box (Overlay)	To notify the user to fill in correct details.	All log in and sign-up pages	1 Button: Close button -> closes overlay	Yes	Users suggest showing different signs for error. System testing improvement was not met.
9	Email sign up page 2	The page where users can Sign up using their email	After user selects/inserts email box	2 Buttons: Password box -> load next page Sign up - > load error box	Yes all	N/A
10	Email sign up page 3	The page where users can Sign up using their email	After user enters/clicks a password box	2 Buttons: Confirm passwords box -> load next page Sign up - > load error box	Yes all	N/A
11	Email sign up page 4	The page where users can Sign up using their email	After user clicks/confirm the password	1 button: Sign up - > load last onboarding page	Yes	N/A
12	Google sign up page 1	The page where users can Sign up using their Google account	After user clicks Google Sign up button	3 Buttons: Gmail box - > loads predetermined email and sends user to next page Password box -> load error box Sign up - > load error box “I already have an account”-> leads user to Main log in page Function: Ripple effect	Yes all	Fix email error, use g-mail account. Improvements implemented after first error.
13	Google sign up page 2	The page where users can Sign up using their Google account	After user selects/inserts email box	2 Buttons: Password box -> load next page Sign up - > load error box	Yes	Improvements implemented after first error.
14	Google sign up page 3	The page where users can Sign up using their Google account	After user enters/clicks a password box	1 button: Sign up - > load last onboarding page	Yes	Improvements implemented after first error.
15	Facebook sign up page 1	The page where users can Sign up using their	After user clicks Facebook Sign up button	3 Buttons:	Yes all	Improvements implemented after first error.

		Facebook account		Facebook email box – > loads predetermined email and sends user to next page Password box -> load error box Sign up - > load error box “I already have an account”-> leads user to Main log in page Function: Ripple effect		
16	Facebook sign up page 2	The page where users can Sign up using their Facebook account	After user selects/inserts email box	2 Buttons: Password box -> load next page Sign up - > load error box Function: Ripple effect	Yes all	Improvements implemented after first error.
17	Facebook sign up page 3	The page where users can Sign up using their Facebook account	After user enters/clicks a password box	1 button: Sign up - > load last onboarding page	Yes	Improvements implemented after first error.
18	Main Login with page	Prompted after “I already have an account” or “Log in here”	After user selects “I already have an account” or “log in here” button 19located on first on boarding page	4 buttons: Google -> Loads user to google log in page Facebook -> loads user to Facebook log in page My email-> Loads user to email log in page “I don’t have an account” -> loads user to main sign up page Function: Ripple effect	Yes all	N/A
20	Email log in page 1	The page where users can Log in using their Email account.	After user clicks Email log in button	3 Buttons: Email box – > loads predetermined email and sends user to next page Passwor box -> load error box Log in - > load error box	Yes all	N/A
21	Email log in page 2	The page where users can Log in using their Email account.	After user selects/inserts email box	2 Buttons: Password box -> load next page Log in - > load error box	Yes all	N/A
22	Email log in page 3	The page where users can Log in using their Email account.	After user enters/clicks a password box	1 button: Log in - > load last onboarding page	Yes	N/A

23	Google log in page 1	The page where users can Log in using their Google account.	After user clicks Google Log in button	4 Buttons: Gmail box – > loads predetermined email and sends user to next page Password box -> load error box Log in - > load error box “I don’t have an account” -> loads user to main sign up page Function: Ripple effect	Yes all	N/A
24	Google log in page 2	The page where users can Log in using their Google account.	After user selects/inserts email box	2 Buttons: Password box -> load next page Log in - > load error box Function: Ripple effect	Yes all	N/A
25	Google log in page 3	The page where users can Log in using their Google account.	After user enters/clicks a password box	1 button: Log in- > load last onboarding page Function: Ripple effect	Yes	N/A
26	Facebook log in page 1	The page where users can Log in using their Facebook account.	After user clicks Facebook Log in button	3 Buttons: Facebook email box – > loads predetermined email and sends user to next page Password box -> load error box Log in - > load error box “I don’t have an account” -> loads user to main sign-up page Function: Ripple effect	Yes all	N/A
27	Facebook log in page 2	The page where users can Log in using their Facebook account.	After user selects/inserts email box	2 Buttons: Password box -> load next page Log in - > load error box Function: Ripple effect	Yes all	N/A
28	Facebook log in page 3	The page where users can Log in using their Facebook account.	After user enters/clicks a password box	1 button: Log in - > load last onboarding page Function: Ripple effect	Yes	N/A

29	Last onboarding page	Indication page that user has completed all onboarding and sign up	After user has completed any sign up/log in process	1 button: “Let’s get started” -> Loads custom theme page Function: Ripple effect	Yes	N/A
30	Custom theme page	Where the user can select their preferences for their colour theme	Accessed after user selects “Let’s get started” button on last onboarding page	6 buttons: Pink colour theme -> Load next page Blue colour theme -> Load next page Yellow colour theme -> Load next page Green colour theme -> Load next page Dark Mode -> load next page Light mode -> Load next page Function: Ripple effect	Yes all	N/A
31	Notifications turn on page	Page for users to select their preference before formally loading the app	Accessed after user select any option on the custom theme page	2 buttons: Yes -> Load next page Later -> Load next page Function: Ripple effect	Yes all	N/A
32	Tutorial page 1	Guide for users on how to use the app/homepage functions.	Accessed after user selects yes/after option on the notifications turn on page at the last stage of onboarding	2 buttons: Yes Please -> Load next page No thanks -> Load Homepage 1	Yes all	N/A
33	Tutorial page 2	Guide for users on how to use the homepage functions.	Accessed after the user selects “yes please” on the first tutorial page	3 buttons: Add widget -> Load next page Empty circles -> Load next page Next -> Load Homepage 1	Yes all	N/A
34	Tutorial page 3 – add widget	Guide for users on how to use the app/homepage functions.	Accessed via: tutorial page 2 – “add widget” or “next”	2 buttons: Empty circles -> Loads next page Next -> Empty circles tutorial page (4) Functional widget	Yes all	N/A
35	Tutorial page 4 – empty circles	Guide for users on how to use the app/homepage functions.	Accessed via: tutorial page 2 – clicking empty circles or “next”	2 buttons: Add widget -> Loads add widget tutorial page (4) Next -> Loads Homepage	Yes all	N/A

36	Homepage 1	Homepage of app	Accessed via dock bar.	11 buttons: Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Mood check in -> Loads mood check in overlay Recent entries -> loads recent entries page Edit moods -> Loads edit moods page Need to talk to someone -> Loads help page Play button widget -> load homepage 2 Today's plans -> Loads calendar page Dock bar buttons (4 buttons load different menu pages)	Yes all	Edit widgets button should be functional
37	Home page 2	Homepage of app Accessed via dock bar.		11 buttons: Settings button located top right -> loads quick access overlay located top right -> load quick access overlay Mood check in -> Load mood check in overlay Recent entries -> load recent entries page Edit moods -> Load edit moods page Need to talk to someone -> Load help page Play button widget -> load homepage 2 Today's plans -> Load calendar page Dock bar buttons (4 buttons load different menu pages)	Yes	N/A
38	Quick access overlay	Providing the user with quick access to settings.	Can be accessed on every page	4 buttons: Sounds toggle -> allows user to turn sounds on/off Dark mode toggle -> allows user to alternate between light and dark mode	Yes	Users suggest involving an actual locking mechanism to visualise how it work.

				Close button -> closes overlay -> closes overlay -> closes overlay Lock and close app -> closes overlay		
39	Mood check in overlay	Where user can submit a mood entry	Can be accessed on all menu pages	10 buttons: Date-> loads calendar overlay Confused -> loads confused emoji overlay Energetic -> selects energetic emoji self-critical - > loads self-critical emoji Calm - > loads calm emoji Anxious-> loads anxious emoji Cancel - > closes overlay Make it a journal entry instead - > Loads journal entries overlay Close button -> closes overlay	Yes	Users found that the “edit moods” button did not work, this should be improved.
40	Calendar overlay	Where user can select different dates when inserting a journal entry	Can be accessed via mood check in overlay or journal entries page	1 button: Selecting current date -> closes overlay	Yes	Allow user to select more than one date
41	Journal entries page	Allowing the user to make a more detailed journal entry	Accessed via user selecting “make it a journal entry”	14 buttons: Date-> loads calendar overlay Confused -> loads confused emoji overlay Energetic -> selects energetic emoji self-critical - > loads self-critical emoji Calm - > loads calm emoji Anxious-> loads anxious emoji Done -> closes all overlays More parameters -> Loads journal entries – more parameters page Back button -> returns user to previous page -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	Implement more functional buttons where the user can choose different activities
42	Journal entries page – more parameter	Allowing the user to make a more detailed journal entry	Accessed via user selecting “More parameters”	14 buttons: Date-> loads calendar overlay	Yes	Allow the user to actually remove parameters

				Confused -> loads confused emoji overlay Energetic -> selects energetic emoji self-critical -> loads self-critical emoji Calm -> loads calm emoji Anxious- -> loads anxious emoji Done -> closes all overlays Back button -> returns user to previous page -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)		
43	Recent entries page	Where user can view most recent entries.	Accessed via homepage button only.	3 buttons: Add entry –> loads mood check in Back button -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay	Yes	N/A
44	Edit moods page	Where user can edit their mood emojis/theme	Accessed via homepage button only.	2 buttons: Back button -> returns user to previous page Settings button located top right -> loads quick access overlay located top right -> loads quick access overlay	Yes	Users proposed that this website be made more interactive by allowing at least one pick of emoji creations.
45	Reminders Page	Where the user can modify app notification settings, track sleep, and personalise page background	Accessed via dock bar.	8 buttons: Control app notifications -> Loads control app notifications page Track your sleep -> loads track your sleep overlay Add entry -> loads mood check in overlay Change your background -> loads change your background overlay Dock bar buttons (4 buttons load different menu pages)	Yes	Users pointed out that the aesthetics of page could be improved to match the rest of the app. Introduce background picture slide show

				Delay effect -> changing of suns indicating change of time		
46	Reminders Page sun change	Where the user can modify app notification settings, track sleep, and personalise page background	Accessed via dock bar.	8 buttons: Control app notifications -> Loads control app notifications page Track your sleep -> loads track your sleep overlay Add entry -> loads mood check in overlay Change your background -> loads change your background overlay Dock bar buttons (4 buttons load different menu pages) Delay effect -> changing of suns indicating change of time	Yes	N/A
47	Control app notifications page	Where user can modify notifications for selected apps	Accessed via Reminders page	3 buttons: Twitter -> loads twitter toggle off page Instagram -> loads Instagram toggle on page Reminders -> Loads reminders page	Yes	Implement other apps with save function like Instagram and twitter.
48	Instagram page Toggle on	Where user can adjust Instagram app notifications	Accessed on control app notifications page when user selects "Insstagram" app	3 buttons: Allow reminders -> loads toggle off Instagram page Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	Yes	Implement the other buttons
49	Toggle off Instagram page	Where user can adjust Instagram app notifications	Accessed via toggling of/on button on Instagram page	3 buttons: Allow reminders -> loads Instagram page toggle on Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	Yes. (errors fixed)	N/A
50	Twitter page Toggle off	Where user can adjust Twitter app notifications	Accessed on control app notifications page when user selects "Twitter" app	3 buttons: Allow reminders-> loads toggle off Twitter page Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	Yes	Implement the other buttons
51	Toggle off twitter page	Where user can adjust Twitter app notifications	Accessed via toggling of/on button on Twitter page	3 buttons: Allow reminders -> loads twitter toggle on page Save settings -> loads control all app notifications page All apps -> loads control all app notifications page	Yes (errors fixed)s	N/A

52	Saved control app notifications page	Showing user that they changed the settings of Twitter/Instagram.	Accessed via: Twitter toggle on page	3 buttons: Twitter -> loads twitter toggle on page Instagram -> loads Instagram toggle off page Reminders -> loads reminders page	Yes (errors fixed)	N/A
53	Change your background overlay	Allows user to change the background of the reminders page.	Accessed via select "change your background button" on reminders page	2 buttons: Save -> closes overlay Close button -> closes overlay	Yes	N/A
54	Calendar page 1	User can preview all their entries in the form of a calendar as well as input a daily schedule. User can also check in with their mood.	Accessed via dock bar.	7 buttons: Remove button for family dinner -> Loads calendar page 2 Check in -> loads mood check in entry overlay Settings button located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	N/A
55	Calendar page 2	User can preview all their entries in the form of a calendar as well as input a daily schedule. User can also check in with their mood.	Accessed via dock bar.	6 buttons: Check in -> loads mood check in entry overlay Settings button located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	N/A
56	Stats analysis page 1	Page summarises all data that has been collected by user input which is presented through a variety of widgets.	Accessed via dock bar.	7 buttons: Settings button located top right -> loads quick access overlay Add an entry? -> loads mood check in overlay Sleep tracker button – Loads sleep tracking page with play button Dock bar buttons (4 buttons load different menu pages) Scroll function	Yes	Implement more widgets that the user can interact with.
57	Stats analysis page 2	Page summarises all data that has	Accessed via scrolling up on page	7 buttons:	Yes	N/A

		been collected by user input which is presented through a variety of widgets.		Settings button located top right -> loads quick access overlay Add an entry? -> loads mood check in overlay Sleep tracker button – Loads sleep tracking page with play button Dock bar buttons (4 buttons load different menu pages) Scroll function		
58	Track your sleep page	Providing user with analysis on their sleeping trends	Accessed when user selects sleep tracking widget on stats analysis page/ when user selects stop button on track your sleep toggle stop page.	Play button -> loads “track your sleep page “ with stop button	Yes	Implement more functions and button to increase interactivity.
59	Track your sleep page toggle stop	Providing user with analysis on their sleeping trends	Accessed when user selects play button.	Stop button -> loads “track your sleep page” with play button	Yes	N/A
60	Settings page	Providing a list of preferences users can modify.	Accessed via dock bar.	7 buttons: Help -> Loads help page Touch ID/Passcode - > loads touch Id pass code page Settings button located top right -> loads quick access overlay Dock bar buttons (4 buttons load different menu pages)	Yes	Users suggested making this page more functionable by allowing them to change the colour theme
61	Touch ID Page	Shows user how registering their touch ID would work	Accessed via – settings page only	Use passcode -> loads settings page	Yes	N/A
62	Help page	Where user can access help if they require it.	Accessed on: homepage/settings page	Settings -> loads settings page (home page help page has different page where user can select back to homepage button instead of this one) External links ->	Yes	N/A

Table 25 shows figures collected from an in-depth user testing evaluation

Appendix P: Focus Group testing

Date conducted: 18th of April 2021

Participants: (2 males, 1 female)

Age group: 10-52

Structure: Repeated measures, opportunity sampling with standardised controls

Description: Participants will be asked about their thoughts on the application whilst navigating through the application

Hypothesis: "There will be a substantial change in the user's ability to navigate through the app"

Findings: Non-directional hypothesis was met, video testing, not transcribed.

Appendix Q: Diary Log of Research Project

Url: <https://dinaaziz001.tumblr.com/>