LUND UNIVERSITY
School of Economics and Management

Department of Informatics

Information Anxiety on Mobile Social Media

A mixed method approach to identifying anxiety-provoking phenomena

Master thesis 15 HEC, course INFM10 in Information Systems

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PUBLISHER: Department of Informatics, Lund School of Economics and Management, Lund University

PRESENTED: June, 2021

DOCUMENT TYPE: Master Thesis

FORMAL EXAMINER: Christina Keller, Professor

NUMBER OF PAGES: 118

KEY WORDS: Information anxiety, Mobile social media, Identified anxiety-provoking phenomena, IS-oriented Solutions.

ABSTRACT (MAX. 200 WORDS):
Information anxiety is a phenomenon in which people yield anxiety when receiving information. Mobile social media (MSM) nowadays plays a vital role in communication among the users, which triggered the authors to investigate the phenomenon of information anxiety on MSM in depth. This paper traces the historical developments using selected literature, and proposes a conceptual model (CM) that is made up from three hypotheses. By conducting a mixed-method approach, the objective of the study is twofold. First, the public perception and holistic view of information anxiety on mobile social media is obtained through quantitative survey, and thus eight identified anxiety-provoking phenomenons (IAPPs) are established. Second, interviewing employees who work for mobile social media companies to generate professional and detailed measures that can be taken to mitigate the negative effect of information anxiety in terms of eight IAPPs. Finally, the meta-inference is leveraged to compare both quantitative and qualitative data in order to provide rich discussion. This study aims at raising the public awareness of information anxiety and to identify critical

and associated research questions where IS scholarship should focus its attention to generate novel theorising regarding the CM and impactful practical insights from the measure as the conclusion.

Acknowledgement

We would like to start by saying thank you and express our gratitude to all the respondents in both the interviews and surveys which made it possible for us to gather insightful and essential data. We also like to extend our thanks to our opponents who have helped with proof reading. Whatever we have done is due to all the people who supported us and gave us feedback and guidance on how to contribute ourself to the domain of information anxiety by gathering insights and knowledge.

Lastly, we are grateful that we managed to accomplish this thesis and extremely thankful for the incredible teamwork.

25th of May 2021.

Agnes Cadier, Jiayi Ding & Sumaia El Khazzar

Content

Figures

Tables

1 Introduction

The conventional wisdom regarding Information Systems discipline as an applied science that examines the technological system, the social system, even investigates the emerging phenomena when the two interact, which contributes to the construction of information system (IS) artifacts (Baskerville & Myers, 2002). IS artifacts (Lee, Thomas & Baskerville, 2015) have been developed to promote the development of this kind of social-technology interaction, and these days the great popularization of social media changes the way people receive information as one of the significant IS artifacts (Bunker, 2020). The increasing pervasiveness of smartphones undoubtedly strengthened this phenomenon, by intertwining with social media and then led to a new environment called mobile social media (Giunchiglia, Zeni, Gobbi, Bignotti & Bison, 2018). According to Statista (2021), there were an estimated 4.08 billion active mobile social media users worldwide by October 2020, around a third of the entire global population. However, social media has created a landscape where the information ecosystem contains three factors: true, false and opinion information (Chou, Oh and Klein, 2018). Social media platforms provide users with a rich experience and function for users to advance and spread the information through sharing, which might accidentally expose variable misinformation to the public. Consequently, some users might feel pressure when maintaining some level of information awareness in the face of ever-increasing quantities of suspicious information (Apuke & Omar, 2020).

Since Wurman (1989) conceptualised information anxiety, it has gone through different stages that cater to the way people receive information. Nowadays, people ' s insatiable appetite towards information has been fueled by social media, a phenomenon that has seen the rise of information anxiety as humans and technology interact. The relationship between social media use and anxiety has been increasingly emphasized by researchers, one study conducted in USA suggested that higher daily social media use was associated with greater dispositional anxiety symptoms in a nationally representative sample of adults (Vannucci, Flannery & Ohannessian, 2017). Regarding the Covid-19 pandemic these years, Huynh (2020) conducted a survey that shows 67% of respondents showed signs of concern and worry about the mass amount of information being spread about Covid-19, and 49 % of them being confused and yielding anxiety symptoms.

The power of social media can be hugely beneficial during a crisis, since information sharing can circumnavigate around the world in microseconds, which enables governance to communicate to its citizens with breaking news. Alongst with the good benefits comes the ability to spread malevolent information which can lead to misunderstanding of science, public panic or financial market hysteria, which can have devastating impact. The only bastion to defend against malevolent misinformation spreading is a worldwide-available and accurate information sharing which conveys a science-driven narrative (Garret, 2020). Despite the fact that science knows how to abet correct information sharing, the damage is already done. When investigating the amount of information and misinformation about Covid-19 one discovers that WHO sees the amount of misinformation as a threat against human ' s health. Tedros Adhanom Ghebreyesus, the general director of WHO stated, on

February 15, 2020, that at the same time as the world is fighting a pandemic, humans are fighting an infodemic, an information epidemic (Da Silva, 2020). For these reasons, WHO has declared a Public Health Emergency of International Interest. Furthermore, based on the historical knowledge, regarding disease outbreaks, one can anticipate that there will be upcoming challenges when it comes to governance trust and trust will have to be proactively built and maintained repeatedly. There will be an extensive need for information coordination in order to manage misinformation and consequently withstand the infodemic (World Health Organization, 2020). Above all, as Marabelli, Vaast and Li (2021) suggested the prominent role of the IS community in enabling positive aspects of technologies used for the digital scars that has been exerted on humans, and mitigates negative impacts by providing insights, especially in the long run, which triggered the authors to investigate further.

1.1 Problem and research question

The interplay between human behavior and technology is a perennial topic in Information Systems discipline.When referring to human behaviour, which is the potential and expressed capacity during the phases of human life including physical, mental, and social activity (Hemakumara & Rainis, 2018). Among them, Anxiety is recognized commonly as an emotional mood and response that reflects affective characteristics, including cognitive, physiological, and behavioral aspects (Steimer, 2002). Considering the substantial burden of anxiety disorders, including extensive societal costs (Whiteford et al., 2013), increasing knowledge associated with anxiety in individuals is essential to enhancing interpretation and developing novel solutions and interventions (Vannucci, Flannery, & Ohannessian, 2017).

Nowadays, individuals have become increasingly dependent on information technology to help them to receive information as undisturbed as possible, social media is one of such. Social media refers to digital technology that enables users to generate and exchange content with others (Carr & Hayes, 2015), and is central to the lives of emerging individuals. Increasing interest in understanding and investigating the impact of social media on the anxious response of individuals as social media become ubiquitous in their daily lives (Vannucci, Flannery, & Ohannessian, 2017). However, the use of social media has the potential to be a source of anxiety and can also reinforce negative self-evaluations when individuals receive unsatisfied information from others or make negative social comparisons (Nesi and Prinstein, 2015).

In the theoretical field, the concept of Information anxiety has gone through different stages, namely library anxiety, computer anxiety and internet anxiety. However, research has shown that little is known about the relationship between social media use and anxiety (Vannucci, Flannery & Ohannessian, 2017). Especially, the challenges of studying mobile social media (MSM) exist due to its changing nature and broad mobility (Humphreys, 2013). There were clearer distinctions between mobile and online social media in this decade, the mobility of MSM helps it become not location-based (Humphreys, 2013). As one of the significant anxiety-provoking phenomena (APP), disinformation takes the advantage of MSM keeps cropping up. When information systems researchers step back to observe our IS development trajectory related to social media of post-truth, disinformation has wreaked digital destruction and havoc on residents' sense of trust (Bunker, 2020). In the covid-19 pandemic, Huynh (2020) conducted research based on Vietnam and found the amount of information on fake news

about the Covid-19 is more than the information released by the official site, which largely yields anxiety on the residents.

Despite disinformation, researchers have been interested in security and privacy concerns arising in social media platforms as it plays a substantial role in yielding anxiety (Alkis, Kadirhan & Sat, 2017). Ho et al (2020) also conducted research to compare the different information sources regarding the excessive information increasingly causing substantial anxious distress among the public. Besides disinformation there are additionally phenomena such as Information seeking (Naveed, 2017), Information overload (Bontcheva, Gorrell & Wessels, 2013), fear of missing out information (Abel, Buff & Burr, 2016), which are all the critical phenomena that provoke anxiety on an individual level through MSM. What's more, from the individual perspective, facets of the personality trait and self-efficacy of users also results in different levels of anxiety, like research has shown young people internalize more pressure to maintain social media network updates (Vannucci, Flannery & Ohannessian, 2017). Even though a number of interventions have been conducted in place to try and curb the negative implications of social media on its users in different dimensions, a framework like FeelCalc (Kalwar, 2012) that analyzes user anxiety on social media has been proposed by IS research. Yet activities like yielding anxiety are still prevalent on social media platforms, and the original concepts of information anxiety (Wurman, 1989) have not been linked to and defined under the context of MSM. In other words, the topic of information anxiety on MSM has rarely been reported in a systematic way.

Above all, what intrigues us is to provide academics with insights into the reasoning behind this phenomena by finding the Identified anxiety-provoking phenomenon (IAPP) of information anxiety on MSM based on mixed methodology, and investigate the measures that can be taken to overcome the challenge from IS perspectives. Above all, our two research questions are the following:

RQ1: *What are the Identified anxiety-provoking phenomena (IAPP) of information anxiety on mobile social media (MSM)?*

RQ2: *What measures can be taken to deal with information anxiety on MSM?*

1.2 Purpose

The rationale for the study is to first investigate the IAPP of information anxiety in the context of mobile social media, and then identify the potential solutions and measures for decreasing the negative impact of the phenomenon. The study will be based on the mixed method, including both qualitative interview and quantitative survey, aiming at raising the public attention of information anxiety, which has led to the emergence of concerns for using MSM. The stakeholders of this study contain three groups: mobile social media users, mobile social media developers and IS research. The intent is, therefore, to contribute to the body of knowledge with new insights regarding information anxiety when interacting with MSM and its IS-oriented solutions.

1.3 Delimitation

Mobile social media are interactive digitally mediated technologies that have different kinds of forms and functions. However, the scope of this study will be limited to MSM and its interaction with its users` anxiety, and the focus will be more on finding the identified anxiety-provoking phenomena (IAPP) of information anxiety under the context of MSM. What's more, the human behavior and physiological activities when receiving different types of anxiety are out of the scope. The scope of the data collection will be conducted within northern Europe and easten Asia. Furthermore, this study will not be able to examine all the IAPPs. To be clear, some part of a selection of IAPPs will be made, motivated through the literature review, and the rest of it will be analysed from quantitative data.

1.4 Definition

The following terms are frequently used within the study and they are self-defined.

Identified anxiety-provoking phenomena: Is an umbrella term which includes Phenomena which cause people to experience anxiety.

Anxiety provoked by technical attributes: A phenomenon which occurs when a person experiences anxiety because of a social media's technical functions.

Anxiety-inducing self-efficacy: Is a phenomenon which occurs when a person experiences anxiety originating from different levels of self-efficacy when using mobile social media.

Excessive information exposure: Is a phenomenon which occurs when a person is excessively exposed to information that originated from mobile social media.

2 Theoretical Framework

The following chapter will focus on three main categories: Information anxiety, Mobile social media and Identified anxiety-provoking phenomenon. These categories contain information collected from the literature review and they will be referred to in the discussion.

2.1 Information Anxiety

The concept of anxiety associated with information or knowledge was firstly studied in 1605 by Sir Francis Bacon, who investigated the conception and also its effects on individuals and organizations in his book '*The Advancement of Learning*' and describe the phenomena as " [t]hat in spacious knowledge there is much contristation, and that he that increaseth knowledge increaseth anxiety " (Bacon, 1605). Almost 400 years later, the concept of Information Anxiety was reemerged by Richard Saul Wurman in his popular book entitled "*Information Anxiety*" in 1989. In this book, Information Anxiety was defined as:

> *"produced by the ever-widening gap between what we understand and what we think we should understand. It is the black hole between data and knowledge, and it happens when information doesn't tell us what we want or need to know" (Wurman 1989, p. 34).*

Two years later, McCarthy (1991, p. 12) defined Information Anxiety more vividly as,

> *"kind of stupor, a feeling that we simply can't keep up, can't read fast enough, don't know how to locate the information we need, don't have time to sort through or think about all the data surrounding us".*

Within the decades, Bawden and Robinson (2009) defined Information Anxiety as " a condition of stress caused by the inability to access, understand, or make use of, necessary information " (p.6). According to online BusinessDictionary, Information Anxiety refers to "the human cost of information overload " ("Information anxiety," 2016). Above all, the concept of Information Anxiety is hard to define, because it will present various meanings under different headings (Girard & Alison, 2008). However, the correct understanding and definition towards its concept is important and necessary (Hartog, 2017).

Different formations within the concept of Information Anxiety has also been investigated by various researchers, Wurman (1989) proposed five broad categories which may cause information anxiety, there are: not understanding information; feeling overwhelmed by the amount of information to be understood; not knowing if certain information exists; not knowing where to find information; and knowing exactly where to find the information, but not having the key to access it. Shedroff (2001) listed four forms that information anxiety has: The first of which is the 'frustration with inability to 'keep up' with the amount of data present in daily life; The frustration with the quality of what one encounter, especially the news that needs being up-to-date and constantly informed; The guilt associated with not being 'better

informed' that not being able to keep up with the amount of data masquerading as information; The dangerous hubris that develops for 'knowing things first'. Bawden & Robinson (2009) concluded the 4 possible causes of Information anxiety are: insufficient information, information overload, poorly organized information, and lack of understanding or incapability to navigate with the contemporary information environment.

However, the confusion of the Information Anxiety exists that much research is completely reliant on the amount of information as Wurman proposed that " information anxiety can afflict us at any level and is as likely to result from too much information as too little information" (Wurman 1989, p. 44). Many researchers view information overload as the core idea of Information Anxiety and therefore reasoning that the only research focus is the big amount of information (Girard & Allison, 2008). In the field of empirical research, Girard (2005) investigated and viewed information anxiety as a distinct and quite different entity from information overload regarding the knowledge management issues that cause information anxiety in Canadian government. The work of Girard was doubted by Allison (2006) and Allison suggested that information anxiety and information overload should be synonymous. However, Girard and Allison (2008) suggested that the focus on overload alone may ease the size of the problem as a technique solution but quantity is not the only consideration when measuring information challenges, exemplifies as simply reducing the quantity of information will contribute nothing to address the concern from Wurman about anxious of not knowing where to find information.

In sum, it is widely accepted that a major cause of information anxiety is the uncertainty surrounding the existence of a particular piece of information (Naveed and Anwar, 2020). Hartog (2017) suggested Information anxiety also concerns the reception, processing, and application of information. There is a need for the re-conceptualization of information anxiety as Wurmam`s framework lack information activities from the perspective of information user, so a new framework will be beneficial to provide holistic view of information anxieties which go beyond the process of information retrieval for information researchers (Naveed and Anwar, 2020). Naveed and Anwar (2019) traced the historical developments of Information Anxiety and revealed that Information Anxiety has gone through several stages that start from library anxiety, and with the consequence of rapid technology, there are different kinds of anxiety that are in connection with that for example computer anxiety, Internet anxiety (Papić, Hefer and Krstanović, 2012).

2.1.1 Library Anxiety

The term of Library Anxiety was first defined by Mellon in 1986 when exploring the feelings of students about using the library for study and research, and the results showed that 75 to 85 percent of the undergraduate students described the feelings in terms of anxiety, exemplifies afraid in approaching library staff, being overwhelmed by the size of the library and its environment, and lack confidence on inadequate self library-use skills. Hence, a grounded theory of library anxiety was constructed as an uncomfortable feeling or emotional disposition that happens when students are utilizing the library or contemplating its use (Mellon, 1986). Mellon (1986) further suggested that solutions should be made to make students know the normality to feel anxious when approaching the library by giving related information literacy classes and presentations and thus reduce the anxiety by acknowledging the existence of these feelings. After that, the concepts of Library anxiety developed by Mellon became the most consistently used knowledge in the later literature (Carlile, 2007).

With the deeper insight into this field, people found it vital to emphasize that good qualitative research carries with it a demand for rigor, as strong as the need for quantitative research. Bostick (1993) viewed library anxiety as a multidimensional phenomenon and investigated its five components: barriers with staff, affective barriers, comfort with the library, knowledge of the library, and mechanical barriers. The measure of library anxiety from Bostick has been used extensively even though investigations into its validity have been less conclusive (Carlile, 2007). In the later years, scholars conducted studies on the relationships between library anxiety and a variety of human personality and behavioral traits (Jiao and Onwuegbuzie, 1999a). For example, groups that have the highest level of library anxiety tend to be the young students who are male with high levels of academic performance, whose native tongue is not English, and who visit the library rarely (Jiao, Onwuegbuzie and Lichtenstein, 1996). Jiao and Onwuegbuzie (1999b) summarized several investigations of library anxiety that relate to self-perception and proved that with the exception of trait anxiety, library anxiety is related to a myriad of personality variables, exemplified in intellectual ability, creativity, academic and social competence.

With the development of digitalization, the modern library has become a dynamic integration of information and technology. The amount of information and also the various methods to access it have added new dimensions to library anxiety (Jerabek, Meyer and Kordinak, 2001). Blundell and Lambert (2014) named the integration of library anxiety and information communication technologies (ICTs) as information anxiety. Naveed and Anwar (2019) proposed a general model of information anxiety that integrates together different anxiety within the nested field, this model viewed information anxiety as the general area of investigation, information seeking anxiety being seen as a subset of the field, and library anxiety as a further sub-set of information seeking anxiety.

2.1.2 Computer Anxiety

The concept of computer anxiety was raised due to the advent and proliferation of computers as its resources can be accessed remotely from anywhere, which changed the way that students receive information (Jiao & Onwuegbuzie, 2004). Even though computers brought advantages as a way to increase efficiency and productivity, a massive number of research discussed the dark impact of the computer, computer anxiety then merged as a concept to describe the tendency of individuals in terms of aversion, uneasy, of fear of being involved with computers currently or in the future (Loyd & Loyd, 1985). The Computer Attitude Scale (CAS) developed by Loyd & Gressard could be seen as a sign that academic work on computer anxiety had begun, CAS was designed to measure attitudes toward learning about and using computers, which contains three components: Computer Anxiety, Computer Liking, and Computer Confidence (Loyd & Gressard, 1984).

Despite the growing interest in the area of computer anxiety, almost 70% of the references dealing with it were nonempirical, which encouraged Heinssen, Glass and Knight (1987) to develop and validate a self-report measure of computer anxiety, the Computer Anxiety Rating Scale (CARS). CARS has demonstrated high validity across cognitive, behavioral, and affective areas, and developed into one of the best validated measures of computer anxiety, also suggesting the negative relation between the computer experience and mechanical interest one has with computers, and the prevalence of computer anxiety (Heinssen, Glass and Knight, 1987). In the empirical field, Rosen and Weil (1996) estimated that almost 40% of the population in America experienced computer anxiety to some degree by collecting samples

among groups such as public school teachers, students, and psychologists. In 2001, Beckers and Schmidt proposed a model of computer anxiety, comprising six factors: Computer literacy; Self-efficacy ("*...confidence in one`s capabilities to learn to use computers...*" (Beckers & Schmidt, 2001, p.786)); Physical arousal; Affective feelings towards computers; Positive beliefs about the benefits for society of using computers, and last, negative beliefs about the dehumanizing impact of computers. Beckers and Schmidt (2001) also suggested that computer anxiety seems to be resulted from accumulating experiences and its magnitude can be manipulated by adjusting the conditions when the experiences are acquired and by channeling the perception of these experiences. Efforts should be put into identifying the solutions regarding computer anxiety, besides constantly improving personal digital literacy, learning styles and methods, the functional ease of users, interface design of computers and the interaction quality can be valued by researchers and practitioners to overcome this anxiety (Beckers & Schmidt, 2001). Powell (2013) did a comprehensive review of computer anxiety from the 1990s and 2000s and proposed a framework documenting the most often studied variables of computer anxiety, and suggested people now have different form of computer anxiety as the updates in technology and the increased ubiquity of computers, future adjustment need to be made in existing scales to measure computer anxiety.

2.1.3 Internet Anxiety

With the gradual popularization of the Internet, the access to information resources has become more comprehensive and timely, the cost of delivering information is also decreasing, however, many Internet users remain uneasy using Internet applications and tend to use traditional methods to accomplish tasks instead of the Internet (Thatcher, Loughry, Lim, & McKnight, 2007). In 1998, Presno first raised the concept of Internet anxiety, and described it as the fear or apprehension that individuals experience when using the Internet. Chou (2003) conducted a careful examination of past research on computer anxiety and found most studies were concluded by 1993, that is, before the Internet had widely connected standalone computers. Thatcher and Perrewe (2002) also suggested that internet anxiety is certainly close to computer anxiety, but they are distinct concepts, as Internet anxiety is a feeling or emotion evoked by the use of web-based technologies. New internet technology has more properties than computers, exemplified at websites that enhance the interaction between human and computer. Further, social media and emails provide access for interpersonal interaction, which are highly applauded by most users, and may cause anxiety in others (Chou, 2003). In addition, the Internet may yield anxiety as it persuades users to learn new terminology and new unfamiliar applications. What's more, the potential for viruses, spyware, or invasions of user privacy also may evoke anxiety when surfacing the internet (Thatcher et al., 2007).

Regarding the components of internet anxiety, Presno (1998) listed four anxieties people have with the Internet: Internet terminology anxiety; Internet search anxiety; Internet time delay anxiety; and general fear of Internet failure. In the empirical field, Thatcher et al. (2007) proposed a model of Internet anxiety, which revealed that personality traits and individual beliefs directly affect Internet anxiety, and it was good for organization to affect perceptions of resources and trust by providing reliable and useful technologies and giving users resources to support their use, and thus reduce Internet anxiety.

2.2 Mobile Social Media

Mobile social media contains various parts and phenomenons, the aim of this chapter is therefore to explain what social media is, what conditions need to be fulfilled using the term "MSM" and also how different users interact within mobile social media.

2.2.1 Social media and its characteristics

Chen, Mocker & Prestion (2010) states that Information system technology (IS) as a phenomenon continues growing as it consists of information technology infrastructure where both data, application systems, and communication services are included. The rule or the term Information system technlolgy consists of developing, implementing, planning, designing, and operating systems to provide services (Chen et al. 2010). Also, it contributes to people and processes where both distribution and dissemination of information is included. The phenomena bring efficiency to business and workers as a bridge to computer science. In addition, Chen et al. 2010) state that information system technology is subservient on computers and other technology-based tools. One IS technology, which is widely used is social media.

The use of social media is increasing daily in a constant state of innovation, growth and change. Social media development is a continuous process where new tools are applied in global practices (Carr & Hayes, 2015). The definition of Social media has evolved over time which makes the term multifaceted. Some scholars argue that the understanding of social media is based on extant technology (Carr & Hayes, 2015).Yet, there is a lack of understanding of social media since no functional or theoretical communication studies explain social media content (Carr & Hayes, 2015). Social media refers to digital technology, including user-generation interaction or content (Carr & Hayes, 2015). However, several definitions have been provided previously. The first social media definition was a communication discipline and information science, public relations and mass media (Carr & Hayes, 2015). The second definition is that social media makes online communication more efficient, where it is easier to collaborate and create networking (Carr & Hayes, 2015). Another fundamental definition of social media is that some scholars state that social media is an internet-based group application with the Web's technological and ideological foundations (Carr & Hayes, 2015).

On the other hand, the scholars also mention that social media is simply a set of digital technologies that created an environment where people can interact, share content and build a social relationship (Carr & Hayes, 2015). Moreover, Carr & Hayes (2015) state that a complex definition has been developed by Howard and Parks where it includes three parts. The first definition includes "...the information infrastructure and tools used to produce and distribute content.", and the second part "...the content that takes the digital form of personal messages, news, ideas, and cultural products; and" and lastly ", the people, organisations, and industries that produce and consume digital content." (Carr & Hayes, 2015, p. 48). Further, they demonstrate specifically that in the literature, social media are frequently denoted. The particular argument does not include the characteristics of social media, but it is more specified for the specific application. Yet, it can be problematic to focus on specific applications. It muffs the actual social impact since it limits the theoretical structure's validity and applicability to descriptive studies (Carr & Hayes, 2015). On the other hand, Meikle

(2016) states that social media has been challenging for scholars to define and understand whether it is an analytical concept or an emerging, flexible, communicative practice. The particular reason that creates a challenging environment is that the definitions overlap each other because they compete and emphasise social media's specific environment. However, Meikle (2016) argues that Social media as a concept involves developing the internet where commercial opportunities generate. Thus, social media creates a vibrant environment for new business. Technological advantages are provided; it is also a corporate name for communication channels to interact (Meikle, 2016).

Meikle, (2016) mentions that the different forms of social media are included in a networked digital environment. Applying both the characteristics and basic affordances of digital information in the digital environment creates new ways to gather and communicate complex information (Meikle, 2016). Yet, Sutherland, 2020 states, approaching social media with one perspective is problematic; additionally, there are multiple social media contexts on the market. Also, the characteristics of social media can either be multidisciplinary and multi-functional (Sutherland, 2020). Moreover, Carr & Hayes, (2015) state that social media is usually referred to as channel characteristics, where it identifies the use of specific tools or directionality of messages.

2.2.2 Mobile social media

Ramawela & Chukwuere (2020) mention that Social media platforms and the growth of technology have significantly impacted people's lives. Most people today have a smartphone or another mobile device that allows people to connect more efficiently than before (Ramawela & Chukwuere, 2020). The power of mobile devices has created an environment where different social media applications have developed (Yadava, Joshia & Rahman 2015). Additionally, Mobile social media (MSM) created a unique way of interaction and networking. Thus, it creates a multiplied definition of what MSM could be. One definition that Yadava et al. (2015) state is that MSM is about user-generated content; it is based on the personal mobile device where individuals converse and connect. The use of MSM also helps the users and organisations to gather information where all the collected data comes to use for communication, marketing, or interaction (Yadava et al. 2015).

Furthermore, Yadava et al. (2015) argue that MSM applications are divided into four categories. The first category is considered a "basis of location sensitivity", where it refers to the user and how it receives the information process. The second category is " time sensitivity." which means if the information process that the user is willing to receive lags, then it becomes " time sensitivity. ". Another definition of " Time sensitivity " is the transformation of messages in a specific time (Yadava et al., 2015). For the third and fourth categories they refer to "Geographic factor" and "location sensitivity." These two factors are not innovative and are used in the MSM field specifically for decision making (Yadava et al., 2015). The third and the fourth factor are connected to the Global Positioning System (GPS) and since the current internet technology can track any mobile device location with GPS, it is easier to identify any mobile device's exact era. It makes it easier to transfer information to mobile devices and social media applications. Yet, if the MSM application does not share its graphic location, tracking and transferring information would not be efficient (Yadava et al., 2015).

Another definition of MSM is developed by Humphreys (2013). Humphreys (2013) mentions, the media landscape has shifted from time to time where mobile devices create the opportunity for social media applications to be used in several ways. Yet, there are different challenges according to MSM. First, it is about the content and the user perspective of MSM (Humphreys 2013). Second, the environment of the user's privacy and security when using MSM applications. Many users that are incorporated within MSM decide to disconnect the public's functionality to protect their private information since they feel secure. Meanwhile, other users are specifically using MSM applications to both find information or read news (Humphreys, 2013). Yet, the content and challenges of what MSM can provide is hard to understand since there is a lack of information and understanding. Thus, Humphreys (2013) states that challenge brings opportunities, and the opportunities that MSM creates are vast. MSM allows the expansion of network and communication where users have the ability to create their own profile and gather a bigger network. Also, MSM helps businesses to interact with users easily where both detailed information about the business and the product itself can be accessible (Humphreys, 2013). By taking advantage of MSM, users and businesses find it more manageable. The users can both share and gather global information and interact with others and businesses have the ability to reach out to their customers more efficiently. It also allows the users, developers and businesses to focus on particular factors within social media applications to improve and create new aspects and advantages (Humphreys, 2013).

2.2.3 How people interact with mobile social media

Sadiku, Adebo, & Musa (2018) mention that the way people live, interact, socialise and work, has changed. MSM has become global phenomena that affect people's behaviour, habits and perceptions. It has become a distribution where it is difficult to be without mobile devices since it has become a part of humans' lives. Additionally, Sadiku et al. (2018) explain, the growth of MSM has developed in recent years and become a social trend. However, social media use with mobile devices such as smartphones has made it easier for users to post on social media applications anywhere (Sadiku et al, 2018). Also, MSM allows users to share personal information regularly or in general, where a new way of social collaboration is provided. Sadiku et al (2018) argue, these collaborations could be content communities, blogs and different social media networking web pages. Mehrotra & Musolesi (2017) describe that the use of MSM has affected both physical and cognitive behaviour. Wohn & Ahmadi (2019) state MSM have made it easier for users to consume news and to share it, and discuss it with others. With so much information, users create profiles to be active on social media.

Whiting & Williams (2013) state that the uses and gratification framework have been used to understand users' behaviour when using MSM. Users on MSM do seek information and try to discover new things that fulfil their needs (Whiting & Williams, 2013). Uses and gratification framework has seven factors that developed an understanding of user and MSM interaction.

1. *Social interaction:*
   According to social media, the first factor has a definition of how users can communicate and interact with each other. Also, it is about social interaction motivation (Whiting et al. 2013). state that this factor conducts two main points; the first one is "meet people with my interests." The second one is "keep up with what is going on." (Whiting & Williams 2013, p. 364).

2. *Information seeking:*
   This factor includes the use of social media by seeking information or self-education. Also, it is about how users use social media to get the information and educate themselves with the data they collect. It is also included that the seeking information is to define what users do with the information they gathered (Whiting & Williams 2013).

3. *Pass time:*
   Looking into the definition of "passing the time", it is most likely to be how users occupy time on social media, which can be because they are bored. Also, it is about how users "need" to use social media applications when they have nothing to do or pass their time (Whiting & Williams 2013).

4. *Entertainment:*
   Whiting & Williams (2013) describes that users can be using social media to entertain and enjoy. It could also be that some users try to escape from reality when using social media and limit themself.

5. *Relaxation:*
   The definition of "Relaxation" is "relieve day-to-day stress". That user could be using social media to minimise the stress (Whiting & Williams 2013).

6. *Communicatory utility:*
   According to social media, Whiting & Williams (2013) states that this factor is how the users have access to communicate and share information with others. It is also about users interacting on different social media platforms to share their opinions and thoughts about the information they found on the internet (Whiting & Williams. 2013). The use of MSM makes it easier for users to share and interact with others.

7. *Convenience utility:*
   The last factor has its definition according to convincing users to be on social media more often(Whiting & Williams. 2013). . The conviction could be about shopping on the web, scrolling through different social media, reading information or communicating with others (Whiting et al. 2013).

The uses and gratification framework gives an overview of the interaction between MSM and users. However, Rook (2015) mentions that MSM do both provide negative and positive impact according to the user′s experience. Also, Rook (2015) states that using MSM can lead to stress, health-damaging behaviour of the user.

Additionally, MSM′s negative impact on users is a more stressful lifestyle where they constantly check their social media applications. Further, there is a lack of source criticism and fake news that affects the users and can lead to uncertainty and anxiety. Nevertheless, Rook (2015) argues that the user witness experience is different from person to person. Thus, younger users face more problems when using MSM than adults (Rook, 2015). The particular reason is that adults have more experience and social relationships than younger users (Rook, 2015). Yet, it is expected that adult users face disappointment and conflictual relationships with others that could affect their health and cause anxiety (Rook, 2015).

2.3 Identified anxiety-provoking phenomenon

There are a lot of different phenomena attached to information and the following chapter contains five phenomena which triggers anxiety based on information in different manners, even though they are overlapped in some extent, they will be referred to as IAPP which is short for Identified anxiety-provoking phenomenon and they will be listed individually in this section. IAPPs will be used as a collective concept, and serves as a thematic base for the conceptual model.

2.3.1 Disinformation

The prevalence and proliferation of social media in almost every facet of people's life have made information readily available (Shu, Bhattacharjee, Alatawi, Nazer, Ding, Karami & Liu, 2020). The availability social media entails, has been improved to be an important information channel during a crisis or pandemic, where one can quickly communicate warnings to the public (Shu et.al 2020). The social media communication platforms have been privileged with the belief of being trustworthy, and a way for communicating to actors or customers at a rapid speed (Yu, Yu, Li, Man & Chen, 2020). Social media has therefore become a powerful communication tool. However, there are some actors which have malevolent intentions and exploit the benefits of social media, by spreading disinformation with the aim to mislead people (Yu et.al, 2020). Disinformation can be defined as inaccurate or manipulated information. The spreading of the information can be unintentionally or intentionally used to mislead or deceive people (Yu et.al, 2020; Granelli, Colley & Althuis, 2020; Figueiredo da Guarda, Pinheiro Ohlson & Romanini, 2018; Shu et.al. 2020).Substantive keywords for searching articles about disinformation seem to be Fake News, Hoax, Rumor, Conspiracy and Misinformation (Shu et.al, 2020).

The spreading of disinformation across the world has been around for some time now, Yu et.al (2020) states that the phenomenon derives from the information disorder in World War 1. However, Shu et.al (2020) accounts that the term “disinformation” has been widely used since the 1950s. One can therefore suppose that the term is not newly invented but to determine when it was established might be a challenge. Nevertheless, during World War 1, was it easy to find the resource responsible for the disinformation henche, was it simple to divert the misinformation (Yu et.al, 2020). One way to solve the problem was to incorporate journalistic norms of balance and objectivity. Nevertheless, humans are now facing new challenges and since Web 2.0, has the internet enabled a faster and easier way to create disinformation. The journalistic norm which previously was the solution to the problem, have been rejected by social media platforms, and to identify the source have become almost impossible. Correlation between education and the belief of disinformation has been indicated by previous studies, people with a higher education have shown source criticism to a broader extent than people with lower education. Studies have also shown that younger people are more likely to believe in disinformation than the elderly, but studies have shown the opposite. It is therefore not possible to determine who is more likely to believe the disinformation, with just previous studies as a base (Granelli, Colley & Althuis, 2020). However, it is patently to suppose some impacts the disinformation can entail and Granelli, Colley and Althuis (2020) advocates for the following implications: Attitude change (e.g. psychological effects of beliefs and cognition) and behaviour change (e.g. politics disengagement).

2.3.2 Information Overload

To use Social media as an information source can have some negative and positive consequences, due to the misleading information, one shown consequence is information overload (Bala, Srivastava, Ningthoujam, Potsangbam, Oinam and Anal, 2021). The critical phenomenon occurs on every social media (Feng, Hu, Li, Stanley, Havlin & Braunstein, 2015). Information overload is defined as the phenomenon in which a person cannot process all the given information and communication (Beaudoin, 2008; Bala et.al. 2021). A phenomenon which a person usually perceives when being on social media and the fluidity of information there (Gunaratne, Rand & Garibay, 2021). Information overload is a major concern amongst information users, information managers and researchers. It is therefore argued that it is important for computer scientists and academics to devise technologies for addressing the effects of information overload (Hoq, 2016). Consequently, will the person which has been exposed to the information overload, not perceive or respond to the actionable information. This does not mean that none of the information will be perceived, studies have shown that the most recent information would be perceived by the person. It is the following information, which could be even more valuable than the first, which the person under information overload, cannot perceive (Gunaratne, Rand & Garibay, 2021; Bright, Kleiser & Grau, 2014).

People are suffering from information repletion, which makes it hard for them to quickly and conventialy discover the right information on the platforms (Hoq, 2016). Information overload is also a consequence of the rapidly expanding of information feeds circulating on social media and a study has shown that there is a threshold regarding which information will have the biggest distribution. The phenomenon therefore affects the information visibility duration on the platform (Feng et.al, 2015). Besides the challenge to find authentic and relevant information, the phenomenon could lead to people witnessing social media fatigue. Social media fatigue can lead to a decrease of peoples usage of IS (Fu, Li, Liu, Pirkkalainen & Salo, 2020). Moreover, information overload and cyberchondria seems to be a common side effect of the enormous amount of information circulation, on various communication platforms, regarding the COVID-19 outbreak in 2020 (Bala et.al. 2021). Studies have shown that people turn to social media for information about COVID-19, and that people find the information to be trustworthy (Bala et.al. 2021). However, the great benefits social media can bring during a crisis, it can simultaneously bring some serious consequences on people's health. Within one of many studies conducted during the COVID-19 pandemic, can one learn that the information overload on social media had some negative effects on Generation Z psychological health (Liu, Liu, Yoganathan, & Osburg 2021).

2.3.3 Fear of missing out information

Fear of missing out or FOMO is a condition where anxiety over the fact that an interesting event may occur elsewhere (Hayran, Anik & Gürhan-Canli, 2020; Hetz, Dawson & Cullen, 2015). The condition is often aroused by posts, regarding the missing event, on social media. The condition might also be triggered by the anxiety of knowing that some people will experience something life-changing, in which one is absent (Hayran, Anik & Gürhan-Canli, 2020). FOMO is not a new condition, it has been around since the upbringing of communication amongst humans. However, the rise of social media has amplified the need for knowing what others are doing, all the hours of a given day. Therforem, is it regarded as social media plays an essential role when it comes to FOMO. The reason for that might be the

availability of information circulating on social media and the fact that people can access it constantly within their phones and computers. An implied consequence of the frequent use of social media, to avoid FOMO, is that people are becoming addicted to consuming information through social media (Beech-Nut, Buff, College, & Burr, 2016). This consequence was examined in another study and the result was clear, there is a connection between FOMO and social media addiction. People feel a bigger need to consume information on social media platforms due to FOMO (Blackwell, Leaman, Tramposch, Osborne, Liss, 2017).

A recent study revealed that there is some avoidance behaviour amongst social media users, due to FOMO (Hayran, Anik & Gürhan-Canli, 2020). Users decide to avoid social media just because they do not want to receive information about a specific event, in which they were absent. A phenomenon which is closely related to this is "selective information search". The phenomenon means that a person is avoiding discomforting information and instead attends to positive information. This phenomenon occurs, for example, within health care where the patient avoids the information which can lead to discomfort and instead possesses the positive information (Hayran, Anik & Gürhan-Canli, 2020).

2.3.4 Information seeking anxiety

The term of 'information seeking anxiety' (ISA) was firstly defined by Erfanmanesh, Abrizah, and Karim (2012) and designed an Information Seeking Anxiety Scale (ISAS) considering the contemporary environment for seeking information. Based on the ISAS, the study of Naveed and Ameen (2017) reported the dimension of 'Thematic Anxiety' as the most prevalent among postgraduate students while they seek information, which are very significant in the digital information environment and usually caused by lack of skills associated with ICTs. Nowadays, with the advancement in technology, social media can achieve information sharing in real time, also with the advantages like enhancing social interaction, entertainment and relaxation, information seeking, expression of views (Whiting and Williams, 2013). Hence, social media became one of the popular tools for people to seek information instead of libraries, especially in the academic (Hamid, Bukhari, Ravana, Norman, & Ijab, 2016) and health context (Zhao & Zhang, 2017).

Hamid et al. (2016) highlighted the need of shifting the information seeking behaviour from libraries to social media by investigating the information-seeking behaviour of international students in terms of their information needs. Zhao & Zhang (2017) summarised previous research regarding how consumers seek health-related information from social media and proved that social media applications on the Internet are empowering, engaging and educating for health care consumers and providers. However, information quality and authority frequently become the most concerning issue as the information on social media is accessible and free (Zhao & Zhang, 2017). What's more, Kim, Sin & Tsai (2014) pointed out that students may yield concerns regarding varying quality of information and social media types when seeking information, so there is a need for librarians to cover different social media platforms in more detailed discussions, as well as how to better evaluate and guide student to search useful information. Currently, the covid-19 situation make the situation even worse, Ebrahim, Saif, Buheji, AlBasri, Al-Husaini and Jahrami (2020) conducted a research in Bahrain and found the most relied on source for covid-19 information was "social media accounts of health organizations", however, the responding interviewees still have anxiety symptoms regarding the reliability when seeking information through social media.

2.3.5 Anxiety regarding information security

Internet hacking and data breaches are two common threats against an individual's security, threats often made by cybercriminals (Elhaia & Hall, 2016; Zhang & Gupta, 2018; Saridakis, Benson, Ezingeard & Tennakoona, 2016). Cybercriminals exploit a critical situation, such as the COVID-19 outbreak by scamming unsuspecting people. The cybercriminals might perform a sybil attack which could harm the functions of the social media platform and heche spread disinformation or malware (Zhang, & Gupta, 2018). The cybercriminals might also perform a scam on people, with the aim of making them buy vaccines which they claim to cure COVID-19 or by implementing malware. Social media platforms are a channel for a rapid information stream and therefore organisations such as the World Health Organization (WHO) and US Centers for Disease Control (CDC) used the platforms to disseminate recommendations and information to obtain a secure information flow to people and discrete the scams (Tang, Miller, Zhou, & Warkentin, 2020). However, even if organisations such as WHO and CDC are working to prevent scamming, there is a paramount personal responsibility regarding what information might be false and so on.

There will not be a holistic approach to information security management, without a clear understanding over how big part the users plays when it comes to security awareness. The users are being portrayed as the weakest link within the information security chain, hence should users contribute to a safer environment (Albrechtsen, 2007). Users often lack the knowledge regarding hacking and scamming online and it is therefore advocated that users should be educated in order to increase the information security on various platforms (Elhaia & Hall, 2016; Saridakis et.al, 2016). Since the paramount of individual responsibility regarding information security online could be comprehensive to understand that people develop anxiety over how safe their information is online. Elhaia and Hall (2016) determined that there is a correlation between information security concern and peoples mental health. However, the data security anxiety was not to be regarded as high as everyday stress, which indicates that it is quite low (Elhaia & Hall, 2016). Nevertheless, this result could be a consequence of an individual's lack of insight to the problem. Individuals might lack the knowledge of how devastating the consequences could be to one's personal life (Albrechtsen, 2007). Individuals could be robbed of their whole identity, a person could pretend to be another user (so called immersery) or the person's social account could be hijacked. The consequences for the target could be devastating (Zhang & Gupta, 2018).

2.4 Tool and Framework

The following chapter will address the framework FeelCalc and its characteristics, which has been used to develop a conceptual model. The second section will explain the conceptual model and how it was developed.

2.4.1 FeelCalc

In 2012, Kalwar, Heikkinen and Porras (2012) proposed a framework that can identify dimensions of users' anxieties when they surf the internet in order to unify common understanding for assessing human anxiety on the Internet. The high-level view of the conceptual framework is shown in Figure 2.1(Kalwar, Heikkinen & Porras, 2012), and it

consists of three elements: the service front-end, FeelCalc and psycho-physiological elements. The lower part contains the FeelCalc and psycho-physiological elements that are conceptualized from medical science and encompassed areas where medical treatment for reducing Internet anxiety, which fall outside of this study. The service front-end represents user experience and human-computer interaction (HCI) and it permits various user characteristics, task characteristics, and task performances to get applicable user reactions which are achieved based on usage of Internet services. User characteristics need to be determined that are made up by various factors, like education, skills and motivation. The task characteristics and performances are determined by the number of tasks given, completed, the time taken, also based on how effective the task is, and how feasible the task is (Kalwar, Heikkinen & Porras, 2012).

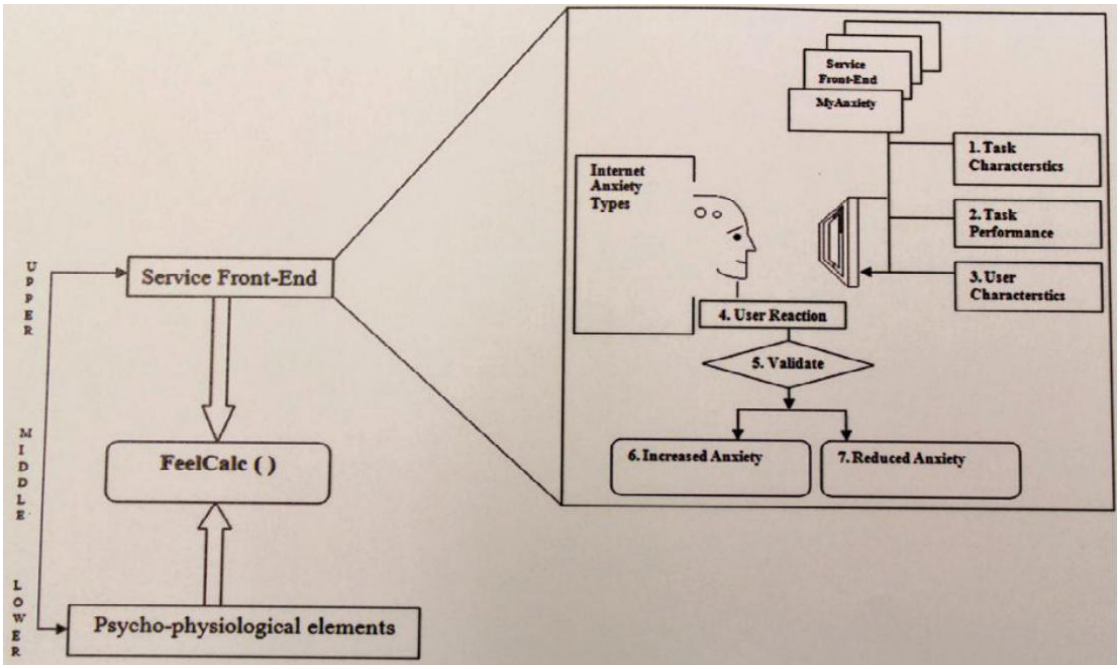

Figure 2.1: High-level view of the Conceptual Framework (Kalwar, Heikkinen & Porras, 2012)

2.5 Conceptual Model

The conceptual model of this study visualizes what the authors have done in the literature review, and is destined to provide the reader with an overview of the relevant concepts and their relationships, showing how information anxiety is performed in the context of MSM. The conceptual model was influenced by the High-level view of the Conceptual Framework created by Kalwar, Heikkinen and Porras (2012) according to the way people yield anxiety when interacting with the Information System artifacts, which is because it withholds the human perspective as well as the technical. The model focuses on finding the different dimensions of users ' anxiety when using the internet, thus establishing a common understanding as to why humans experience anxiety. Nevertheless, the model seemed to focus more on the human's perspective of how people get anxiety when interacting with the internet, which gave the authors the inspiration to use it as a reference to develop a conceptual model that connects MSM and its users` anxiety. In order to be more IS-oriented, the conceptual model tends to be focused both on the IAPPs and technical attributes of MSM, which are

lacking from Feelcalc (Kalwar, Heikkinen & Porras, 2012). Regarding the conceptual model, three hypotheses are established in order to evaluate the relationship among the constructs, which will be explained precisely in the coming section.

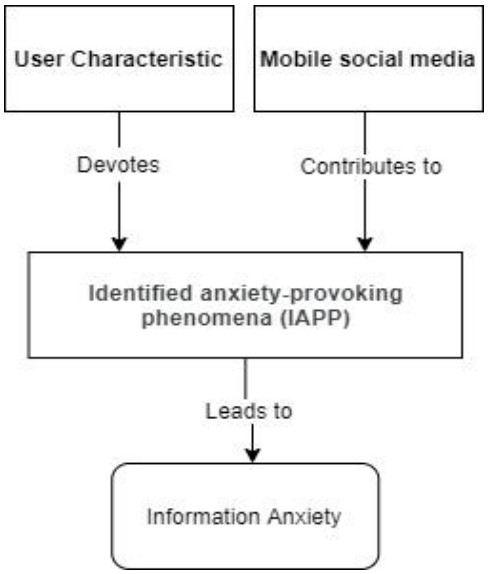

Figure 2.2: Conceptual Model (Created by the authors)

Generalized by the academic research of information anxiety (Loyd & Gressard, 1984; Jiao & Onwuegbuzie, 1999b; Beckers & Schmidt, 2001; Thatcher et al., 2007), *User Characteristics* here is defined as personal characteristics of MSM users, including individual background, exemplifies in age, gender, regionality and educational level, the contacts with MSM, like the time spent on social media and its utilization. *Mobile social media* refers to the technical setting of mobile social media, which is more advanced compared to the way that people receive information from the past, like the great mobility and universality of MSM compared to the way through libraries or computers. Mobile social media has its own characteristics that contribute to yielding anxiety when interacting with its users. The *Identified anxiety-provoking phenomena* (IAPP) means the information anxiety types that are found based on the literature, which includes *Disinformation*; *Information overload*; *Information FOMO*; *Information seeking anxiety*; *Anxiety regarding information security*.

2.5.1 Hypothesis

Above all, the authors identified possible relationships between the different *IAPP´s* which were included in the making of the conceptual model. However, these relationships are not defined in the literature and the IAPP´s seem to be separated in the research field. It is therefore important to test these relationships in order to evaluate if they are existing and henche, be used as a base for further research.

HP1

User characteristics devotes how susceptible the user is to developing information anxiety as an aftermath of exposure to the IAPP´s.

HP2

Mobile social media and its characteristics factors contribute to the increase of IAPP, circulating on social media.

HP3

The phenomenon of IAPP leads to people feeling information anxiety when or after using mobile social media

The three hypotheses will be tested individually by conducting the quantitative research, the conceptual model will be evaluated by gaining the empirical evidence through the hypotheses. In essence, the presented conceptual model will lie as a foundation and also a tool for guiding the later research, which in turn ensures that the qualitative and quantitative approach of this study are directly anchored in the general consensus of the respondents.

3 Methodology

A fundamental part for conduction research is its methodology, which will be declared in the following chapter. The chapter will first explain the research strategy and then move on, accounting for the literature review. The second part will account for the data collection and sample, and the last part will include research quality, including parts such as ethics.

3.1 Research Strategy

Recker (2012) claims that one of the most important choices when creating the research design is to choose a suitable research methodology, a statement the authors have taken into a serious account when choosing methodology. In order to achieve complete understanding of a social phenomenon, multiple paradigms are needed to adequately capture the objective world, the subjective world, and the social world (Mingers, 2001). To truly understand the reasoning behind information anxiety phenomena on MSM, mixed methods are applied within our research, which is characterized by a combination of quantitative and qualitative methods within a single study (Ågerfalk, 2013). Furthermore, Denscombe (2018) states a range of benefits when using a mixed methodology, benefits such as: a bigger picture of the phenomenon, a more comprehensive analysis and a clearer understanding of the phenomenon. Since this research aims to answer but also to understand a specific phenomenon, the authors argue that a use of mixed methodology is advantageous. Additionally, the purpose of using mixed methods is complementarity, which in order to gain complementary views about the same phenomena (Venkatesh, Brown & Bala, 2013). Patton (2015) also argues that a mixed method approach allows for more nuanced answers to research questions as it allows research methods to complement and build on other methods.

Additionally, the use of, and emphasis on, each of the qualitative and quantitative may be different (Ågerfalk, 2013). Our research aims to generate a more holistic view on the IAPPs when using MSM, and also to be able to understand the general public` perceptions while also examining technological and management experts that work for MSM companies` opinions regarding the solutions and measures of IAPPs in the context of MSM. As Recker (2012) suggested, in order to increase the generalisability of the research, the mixed method is applied within our study. Information anxiety is increasingly becoming a social phenomena in this digital world, the correct understanding and its solution need to be found based on both quantitative and qualitative collection and analysis.

The mixed method is conducted through qualitative interviews and quantitative surveys. As Creswell (2003) mentions, the sequence in which the qualitative and quantitative data collection will be implemented is a central question. In our study, the survey works as an additional way to figure out the reliability of our theoretical model that was designed in literature review, and explore more potential insights regarding the normal social media user` perceptions about our topic. What's more, some of the feedback and answers obtained from

the survey ought to be used in the subsequent interview context, which cater to one of the general scientific research quality criteria that Patton (2015) listes, conceptual approach, that is ‘Measure what is measurable statistically, and explore the additional meanings found through interviews’. As mentioned, qualitative data is subsequently collected by means of semi-structured interview, Denscombe (2018) states doing interviews allows researchers to focus directly on the topic where they, together with the participant, can discuss open questions and sub-questions, and explore the initial findings in more depth.

Given the nature of mixed methods, a study could be inductive, deductive, or a combination, which is contingent on the overall research design and has to be considered in relation to the research questions at hand (Ågerfalk, 2013). Consequently, the authors argue our research is a combination of deductive and inductive, as the study includes both quantitative surveys and qualitative interviews to answer our research questions. Regarding the research philosophy, as Denscombe (2008) suggests, interpretive and positivist research can coexist, and fusing them together to generate data can furthermore also be described as a pragmatic approach. Denscombe (2008) presents the disadvantages of lacking consistency or agreement that may exist for some mixed methods research, exemplifies how quantitative and qualitative elements of research should be used within a specific project and whether they can be integrated, combined. However, Pragmatic approach can help people accommodate the varieties and inconsistencies within the mixed methods approach through the flexible operation, and also provide rich and adequate answers (Denscombe, 2008). What's more, Ågerfalk (2013) also encourages new, innovative, and productive approaches of mixing methods and paradigms to solve significant IS problems and to bring new insights to the IS field.

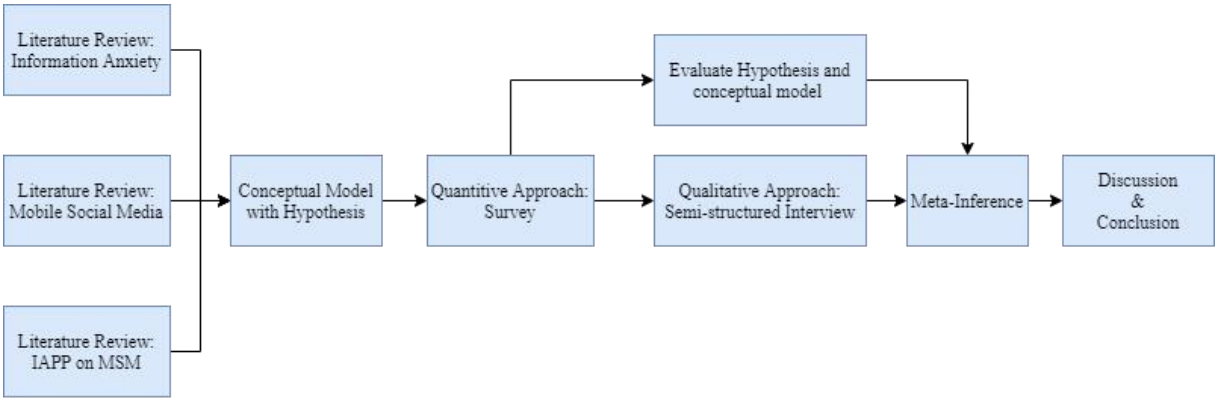

Figure 3.1: Research Strategy (Created by the authors)

3.2 Conducting Literature Review

To gain further knowledge of the phenomenon, a literature review is conducted. A literature review has a significant importance when conducting research because the authors need knowledge from others in order to contribute to knowledge (Recker, 2012). The knowledge gained from doing the literature review helps explicitly determine the criteria for inclusion and exclusion of the research, including choosing topic, methodology, and also assistance in developing the research question by identifying potential knowledge gaps within the previous literature (Randolph, 2009). Additionally, Randolph (2009) states a systematic literature review increases the reliability of the research, avoids useless approaches and provides new insightful perspectives.

The data collection process often begins with an electronic search of academic databases and the Internet (Randolph, 2009). Practically, our study achieves systematic literature review by utilizing databases such as LUBsearch, Google Scholar, AIS eLibrary and EBSCOhost in order to get academic articles and conference papers. Randolph (2009) also suggested that the researcher should document the process when conducting the literature review, thus the electronic database search process employed in this thesis is presented in the Table 3.1 below.

Table 3.1: Outline of literature review

NR	Search Word	Database	Authors	Criteria
1	Information Anxiety	LUBsearch; Google Scholar	Wurman (1989); Bawden & Robinson (2009); Girard & Alison (2008); Hartog (2017); Shedroff (2001); Naveed &Anwar (2019); Naveed &Anwar (2020); Papić, Hefer & Krstanović (2012);	Peer-reviewed, book or academic article, english & subject: Information Anxiety.
1.1	Library Anxiety	LUBsearch; Google Scholar	Mellon (1986); Carlile (2007); Bostick (1993); Jiao & Onwuegbuzie (1999a); Jiao & Onwuegbuzie (1999b); Jiao, Onwuegbuzie & Lichtenstein (1996); Jerabek, Meyer & Kordinak (2001); Blundell & Lambert (2014);	Peer-reviewed, book or academic article, english & subject: Library Anxiety.
1.2	Computer Anxiety	LUBsearch; Google Scholar	Jiao & Onwuegbuzie (2004); Loyd & Loyd (1985); Loyd & Gressard (1984); Heinssen, Glass & Knight (1987); Rosen & Weil (1996); Beckers & Schmidt (2001); Powell (2013);	Peer-reviewed, book or academic article, english & subject: Computer Anxiety.
1.3	Internet Anxiety	LUBsearch; Google Scholar	Thatcher et al. (2007); Chou (2003); Thatcher & Perrewe (2002); Presno (1998);	Peer-reviewed, book or academic article, english & subject: Internet Anxiety.
2	Mobile Social Media	LUBsearch; Google Scholar	Carr & Hayes, (2015); Meikle, (2016) & Sutherland, (2020)	Peer reviewed, english, academic article & Cited
2.1	Social Media	EBSCOhost LUBsearch; Google Scholar	Ramawela & Chukwuere (2020); Yadava et al. (2015) & Humphreys (2013)	Peer reviewed, english, book, academic article & Cited
2.2	Interaction between human and social media	EBSCOhost LUBsearch; Google Scholar	Sadiku et al., (2018); Mehrotra & Musolesi (2017); Wohn & Ahmadi (2019); Whiting & Williams (2013) & Rook (2015)	Peer reviewed, english, academic article & peer reviewed & Cited
3.1	Disinformation	LUBsearch; Google Scholar; Research Gate	Shu, et.al., (2020); Yu, et al., (2020); Granelli, Colley & Althuis, (2020); Figueiredo da Guarda,	Peer-reviewed, academic article, english & subject: disinformation.

			Pinheiro Ohlson & Romanini, (2018);	
3.2	Information Overload	LUBsearch; Google Scholar; Research Gate	Bala, et al., (2021); Feng, et al., (2015); Beaudoin, 2008; Gunaratne, Rand & Garibay (2021); Hoq, (2016); Bright, Kleiser & Grau, (2014); Fu, et al., (2020); Liu, et al., (2021)	Peer-reviewed, academic article, english & 2019-2021
3.3	Fear Of Missing Out	LUBsearch; Google Scholar; Research Gate	Hayran, Anik & Gürhan-Canli, (2020); Hetz, Dawson & Cullen, (2015); Beech-Nut, Buff, College, & Burr, (2016); Blackwell, et al., (2017)	Peer-reviewed & academic article
3.4	Information seeking anxiety	LUBsearch; Google Scholar	Erfanmanesh, Abrizah, & Karim (2012); Naveed & Ameen (2017); Whiting & Williams (2013); Hamid et al. (2016); Zhao & Zhang (2017); Kim, Sin & Tsai (2014); Ebrahim et al. (2020)	Peer-reviewed, book or academic article, english & subject: Information Seeking Anxiety.
3.5	Anxiety regarding information security	LUBsearch; Google Scholar; Research Gate	Elhaia & Hall, (2016); Zhang & Gupta, (2018); Saridakis, Benson, Ezingeard & Tennakoona, (2016); Zhenya, et al., (2020); Albrechtsen, (2007)	Peer-reviewed & academic article

3.3 Quantitative Data collection

A quantitative data collection is a web-based approach where surveys are used. Recker (2013) explains that collecting data from a larger group is a relatively easy way to gather information. Also, using surveys gives an exploration to become more frequent with the phenomenon (Recker, 2013). Using surveys in this research will facilitate the data collection regarding MSM users by gaining their opinions and thoughts according to information anxiety (Recker, 2013).

When formalizing a survey, Recker (2012) recommends the author to use a question of interest. Thus, Recker (2012) explains that the questions about the phenomena should be based on "what", "how" or "why". The first research question within this research is therefore formalised as a “What” question, and the aim is to answer it through the survey questions. The way to finding the answer of research question two does include three hypotheses, which aims to identify the relationship between IAPP, found within literature. The questions were therefore formalised after IAPP and followed the same order as the literature review. Besides the aim to discharge or determine the hypothesis, there was a second aim, to find technological solutions which could be deeper investigated within the interviews.

In this research, the surveys' distribution is based on a larger scale to understand the phenomena. Also, the scale is focused on different target groups within the MSM field.

Further, the primary interest groups were founded online, on different social media platforms, such as Facebook, LinkedIn, Wechat and Instagram. The authors shared the survey in our profile, different social groups and private messenges to reach out to as many users as possible.

3.3.1 Selection of Survey Sample

With the aim to find applicable respondents to answer the study question, it is beneficial to use a sample (Recker, 2013). The sample selection can be designed in different ways, the sample selection for this survey is random. The selection of the random sample design was founded in our belief that the research needs a rich data collection from different age groups, education, originality and so on, in order to discharge or determine the three hypotheses within the study.

The survey was then charted through Facebook, LinkedIn, Wechat, Instagram and Microsoft Teams from all the authors accounts, to find the random sample selection. The motivation for using different platforms was to find different users, which might have been hard if the survey would only be posted on Facebook. Which might result in angled survey responses, a consequence which the authors avoided by using different platforms to reach out and find respondents. The aim was thus, to find different kinds of MSM users. Furthermore, the choice of using all of the author's accounts was based on us wanting samples from different parts of the world. Finally did the authors make it possible for the respondents to share the survey and anyone could answer the survey, independently of their location.

3.3.2 Survey Guide

When creating the survey, the main emphasis concerning the questions for the respondents was to develop questions that will allow us to collect relevant data to answer both the research question and the hypothesis. In addition, to analyze the different perceptions, the survey started with questions about whether the users use MSM at least once a day. If the respondent would select the option "no", then the survey shall end.

The survey was designed after two themes. The first theme was questioning the users' general information, such as age, gender, educational level, and location. Secondly, the remaining questions were based on information anxiety when using MSM. Thus, the questions that are designed for the survey have the answer of "Yes", "No", and "I don't know". Some questions were complemented with "Never", "Rarely", "Sometimes", and "Always." In addition, the following questions in the surveys, such as *"feeling overwhelmed when there is too much information"* or *"if they feel anxious when being exposed to increasing quantities of fake news on mobile social media"* or *"afraid that their personal information will be leaked",* a Likert scale has been applied with a five-point grading scale. The grading scale contributes the ranges from "completely disagree." to "completely agree." Further, some of the questions allow the users to select more than one option and have the ability to give a short comment or thoughts regarding the phenomena.

However, the formulation of the question will hopefully generate valuable data where a deeper analysis can be provided (See appendix 1)

3.4 Qualitative Data collection

Concerning the qualitative data collection, this study will utilize interviews with a semi-structured method. Schultze and Avital (2011) suggested that the qualitative research interview is the most widely used qualitative research method, also in IS disciplines, which includes. Recker (2013) states, the definition of a semi-structured approach is two-way communication where it contributes open-ended questions. The open-ended questions allow the researcher to be more open where some improvisation needs to be provided (Recker, 2013; Denscombe, 2018). Having the capability to improvise gives us the possibility to ask the respondent to evaluate their response, which consequently can result in a more detailed answer from the respondent (Recker, 2013). Further motivation for a semi-structured approach would be the possibility to gain a deep understanding from the interviewee's perception of the phenomena (Recker, 2013; Denscombe, 2018). Furthermore, Recker (2013) advocates that semi-structured interviews should be conducted face-to-face. Unfortunately, due to the COVID-19 outbreak, the interviews were held through a digital communication tool such as ZOOM. The use of digital communication tools can affect the interview since it can be a bigger challenge to observe and analyze the respondents body language. The solution to this was to have the cameras on during the interviews.

The interviews included individuals with different positions, such as, Software developer, AI-developer, data manager, data scientist, marketing and operational. Respondents were thus found by searching for persons which had the specific position on different social media platforms such as LinkedIn. Also, some of the participants were found within the authors network area. When preparing for the interview, the authors realized that using the digital communication platform ZOOM is beneficial for this study, since the authors are familiar with the software. In addition, using Zoom gives the authors the ability to record and open more connections with the respondent, the interview thus started by asking for permission from the respondent if it was okay to record the interview through the software. Furthermore, since the study was made by three researchers, the work was divided, where one of us asked the respondent the questions, and the other two did some documentation and thought about further questions to ask.

Lastly, the respondent from the interview agreed to be recorded. Thus, it made the transcription process easier. Within the transcription process was the software MAXQDA used. When the transcription process was done the files were saved as PDF, which was uploaded to Google Drive for availability when analyzing the data (the transcription can be found in the Appendix). Further information about the respondent, see table 3.2.

Table 3.2: General information about the respondent

Respondent	Organisations/Social media platforms	Communication channel	Date
Respondent 1	DiDi, Wangyi	Zoom	2021-04-28
Peng, Alina	Xinlang (Weibo)	Zoom	2021-05-04
Respondent 3	Works in different social media platforms (Instagram	Zoom	2021-05-

	& Twitter)		06
Tageltia, Sanja	NA-KD	Zoom	2021-05-07

The respondents within this study worked at different companies, as one can see in table 3.2, and the reason behind this is because the authors wanted a comprehensive view of different platforms.

3.4.1 Selection of Interview Sample

Denscombe (2018) explains that an interview doesn't give you the answer of a whole population. Doing an interview gives you the ability to gather information from a specific area and specific perspective of the phenomena. In this case, selecting participants for the interviews is essential where the interviews have to be involved within the scope of the phenomena (Denscombe, 2018). Further, Denscombe (2018) explains that the first step is to identify and describe what type of participants is needed for the research. The second step is to identify age, gender, position and experience. Thus, to get the most proprietary participants for the study (Denscombe (2018). Also, identifying the sample selection.

The selection of the interview sample is non-probability. The non-random creature means that not all individuals can participate or be included in the interview. In this study, the sampling is non-probability, where the authors searched for respondents with experience and knowledge within MSM and information anxiety. Thus, getting the correct information regarding the phenomena, the interview participants have been selected regarding their position (See table 3.3). It was also considered that age, experience, position and company, was important for the data collection. Contributing time considering this point gives the ability to get participants with good experience and proficiency. (Denscombe, 2018). A list has been made regarding the interview participants where it shows their age, position and experience (see table 3.3).

Table 3.3: Overview of interview participants

Name	Age	Position	Experience
Respondent 1	24	Product Manager of AI	1.5 years
Peng, Alina	22	Machine Learning Engineer	6 months
Respondent 3	21	Adviser for a politician and Communication	7 years
Tageltia, Sanja	29	Product Relations Manager	5 years

3.4.2 Interview Guide

Denscombe (2018) mentions that before conducting an interview, the researcher has to design a list of questions (guide). Recker (2013) states that an interview is more than just a conversation. It is an in-depth discussion about a specific phenomena and two-way communication. Two-way communication gives the participants the ability to ask the interviewer questions (Recker, 2013). Also, the data collection from a semi-structured approach provides a reason for the answers and gives the ability to the participants and interviewer to learn and share knowledge (Recker, 2013).

Regarding the interview guide, two themes have been developed. The first theme in the interview guide includes general information (background questions) and the second theme contributes to IAPP (Identified anxiety-provoking phenomena). The questions are designed to include all the different information anxiety factors where they also contribute to MSM. Since the study uses a semi-structured interview, the authors were given the possibility to design some questions on the forehand but also to ask follow- up questions. This gave the authors the possibility to get a deeper understanding of the phenomena (Recker, 2013). Since the participants did come from different organisations the authors designed two interview guides to get a richer view (See appendix 4 & 5).

An invitation letter was created before reaching out to the possible respondents. After creating the invitation letter, the authors send it out to gather between 5-6 interview participants, 4 interviewees accepted the invitation. Nevertheless, before beginning the interview, the authors ensured that the participant is aware of all the ethical guidelines included, such as the right to be anonymous, record participant permission, cancel the interview, and skip a question if they don't want to answer. Also, The authors made sure that the participants are aware that all the information will be used for research.

3.5 Data Analytics

3.5.1 Analyzing Quantitative Data

According to Recker (2013), the main type of responses of the quantitative analysis approach is to put a focus on frequencies and tendencies on certain answers that were utilized in order to detect common patterns throughout the responses that consisted of scales and numbers. The survey was active from the 22nd of April until the 1st of May, and was shared on Facebook, LinkedIn, Instagram, WeChat and through direct messages, and it was available for one week and there were 108 respondents.

After the initial process of sending and sharing the survey, then the data collected from Google Forms were transferred into an Excel file where the information was sorted, analyzed, and trimmed with the intention to create consistency within the results. The Table below shows the analysis label that corresponds to the questions on our survey, which helps us easily sort and analyze the quantitative data in Excel files. The figure below gives the short example of the processed data from respondents in the Excel file, that were deemed to fit the inclusion criteria described by Bhattacherjee (2012), including numerical answers, binary answers, Boolean answers, and Likert scales.

Table 3.4: Analysis label of quantitative data

Analysis Label	Survey question
Age	Q2: What is your age?
Gender	Q3: What is your gender?
Regionality	Q4: Where are you from?
Educational Level	Q5: What is your highest completed educational background?
Hours_spent	Q6: How many hours in a day do you spend on Social media?
Utilisation	Q7: What do you use social media for? (at least select one)
Awareness	Q8: Have you reflected on your social media use and how that affects your mental health and yields to anxiety?
Disinformation	Q10: Sometimes I feel anxious when being exposed to increasing quantities of fake news and false information when using mobile social media.
Information Overload	Q11: Sometimes I feel overwhelmed when there is too much information circulated on mobile social media
Information FOMO_1	Q12: Sometimes I feel left out when I see posts on social media about events that I didn't attend
Information FOMO_2	Q13: Sometimes I keep away from social media to avoid seeing posts of an event I missed.
Information Seeking Anxiety	Q14: Sometimes I feel anxious when I could not find the information I want when using mobile social media.
Information Security_1	Q15: Sometimes I am afraid that my personal information will be leaked.
Information Security_2	Q16: Sometimes I feel afraid that my mobile social media accounts will be hacked.
Technical Attributes	Q17: Sometimes I feel more anxious when using certain mobile social media platforms due to their functions, layouts and other attributes.
Self-efficacy	Q19: I am aware that people may have different levels of abilities to be anxious when receiving information on mobile social media.

Regarding the questions that require respondents to answer in a sentence based manner, the results of them are also presented in the table, which allows the respondents to elaborate and share their own opinion and thoughts.

3.5.2 Analyzing Qualitative Data

A method which one can use to analyse qualitative data is to use Computer Assisted Qualitative Data Analysis Software (CAQDAS). One software to find under CAQDAS is MAXQDA, which enables analysis of commonly collected data. The collected data can be categorised and coded, but the software also has functions such as searching, automatic coding and a logbook. MAXQDA is therefore a software which can support the researcher throughout the research (Kuckartz & Rädiker, 2019). Based on these arguments, the authors decided that MAXQDA would be the right choice to transcribe and code the interviews. However, it was decided that it would be beneficial to design the coding schemes first and then implement them in the software. The authors Kuckartz and Rädiker (2019) also explained how to use MAXQDA when doing a mixed method, which further motivated the choice of software. The researcher can implement his or her meta-inference as logical conditions, which are referred to as values within the software (Kuckartz & Rädiker, 2019). Oppose that we have collected some data from the interview and some from the survey and we want to find correlations, and we decide to use values to find them. Oppose that we create a value with two conditions, something like this: “have felt information FOMO = yes” and “age = 20-30”. The first data is collected through interviews and the second is collected through surveys. The software will now give a result of how many correlations exist within the two different data types. A correlation which might have been complicated to find without MAXQDA. The outline for the transcribing, coding and analysis within MAXQDA is therefore as follows: establish the coding scheme and then transfer the audio-file into the software, and finally implement our meta-inference as values for the analysis.

Table 3.5: Code: Background

CODE	Background
B-P	*Position*
B-A	*Age*
B-G	*Gender*
B-E	*Experience*
B-N	*Nationality*

The coding scheme is divided into two main tables, Information anxiety on social media and MSM. The tables are founded from our Theoretical Model (fig. 2).

Table 3.6: Code: Information anxiety on MSM

CODE	IAPP
DI	*Disinformation*
IO	*Information overload*
IF	*Information FOMO*

IS	*Information seeking anxiety*
AS	*Anxiety regarding information security*

One example for when coding after table 3.6, might look like this: Person X experiences difficulties when marketing a product on social media since there are so many other marketed products on the platforms. This would then be coded as IO (Information overload) when transcribing the interview. The second table 3.7 refers to the conceptual models second part "Mobile social media". Excessive themes which were created after the survey and which were used to code the interviews with, where the following:

Table 3.7: Code: Information anxiety on social media

CODE	IAPP	*Created from answer on question:*
AI-SF	*Anxiety-inducing self-efficacy*	19
EIE	*Excessive information exposure*	18
AP-TA	*Anxiety provoked by technical attributes*	17

Table 3.8: Code: Solution

CODE	Mobile social media
TS	*Technology solution*
MS	*Managemental solutions*

A coding example would be: User X answers that he or she believes AI can be a technical solution to the information overload phenomenon, which would result in a coding of TS.

3.5.3 Meta-Inference

A holistic view of the data is critical in order to complement the theoretical framework, which the author set out to do. The holistic view is developed through the use of Meta-Inference strategy, where the aim is to understand the whole study and not just its parts (Venkatesh, Brown & Bala, 2013; Teddlie & Tashakkori, 2019; Plow, Moore, Sajatovic & Katzan, 2017; Kuckartz & Rädiker, 2019). It is not an infrequency to use the collected data within a mixed method, as two different studies within one study, a meta-inference approach enfeebles this phenomenon to occur (Venkatesh et. al, 2013). The quantitative and qualitative data represent this study's parts. The process of identifying meta-inference could be illustrated accordingly:

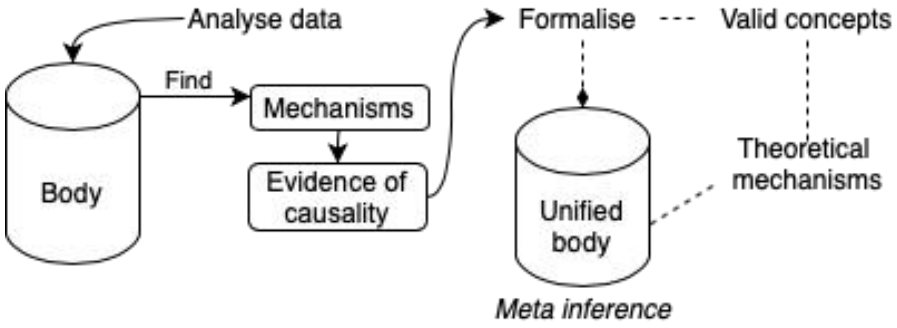

Figure 3.2: Mera-inference

The body is the available data collected from both methods which the researcher has at its disposal. Therefore is the starting point to analyse the data and then establish the body, with the aim to find mechanisms and evidence of causality. When these are found, it is time to formalise a unified body, containing valid concepts and theoretical mechanisms, that is - meta-inference (Venkatesh et.al, 2013; Teddlie, 2009). Nevertheless, it is important for the researcher to decide upon, which data should be analysed first, a decision which Venkatesh et.al (2013) reference to analysis-path. The analysis path within this study is as follows: Unify the quantitative data, then unify the qualitative data, which will be the base for the meta inference. When developing the meta-inference, one can use two different approaches: Bracketing and Bridging (Venkatesh et. al, 2013), bracketing will be used within this study. This infer that the authors will incorporate views of the phenomenon with the aim to theorise and utilise both quantitative and qualitative findings. It is our aim to create meta-inference as the figure 3.2 represents: first off, will the authors collect the qualitative data, the survey that is, and then the quantitative data. The data will then be analysed separately, starting with the qualitative data where the aim is to find mechanisms which might contribute to a richer picture of the phenomenon or which are contradictory. When that is done, it is time to do the same with the qualitative data. The study now has a body of data and the following steps are to formalise valid concepts and theoretical mechanisms, which will be our meta-inference.

3.6 Research Quality

This is the last section of the methodology chapter, and it will account for reliability and validity, ethical consideration and finally, research limitations.

In order to ensure the scientific and high quality of the research, reliability and validity need to be considered, which are the measurement variables that describe benchmarks used to assess the adequacy and accuracy of methodology procedures (Bhattacherjee, 2012). The reliability of research is needed to measure the extent to the consistency and preciseness of a theoretical construct, including the data collection and data analysis procedures (Bhattacherjee, 2012). To be more general, reliability here means the operation of our research can be repeated anytime in the equal underlying environment, and yield the same results (Recker, 2012). The instruments used for surveys (e.g., SurveyMonkey) also will be tested beforehand to increase reliability (Recker, 2012). As for the interview, potential interviewees will be contacted and pacified in advance, sensitive questions will also be reminded in the early stage. These efforts are made to reduce the subjective bias that are inevitably merged when doing empirical study, which are the sources of reliability problems (Recker, 2012).

Regarding validity, it refers to whether the collected data and its analysis really achieve what researchers are supposed to get and appropriately answer the research question (Bhattacherjee, 2012; Recker, 2012). Validity can be split up into two types when testing cause-and-effect relationships: internal and external validity.

- Internal Validity, also called causality, refers to the degree of confidence that the tested causal relationship is trustworthy and is not affected by other factors or variables (Bhattacherjee, 2012). To ensure internal validity, a rich and detailed background study will be put into effect before framing the survey and interview questions, like the in-depth introduction to information anxiety under the context of MSM. As mentioned before, pilot testing was conducted to find out if the interview questions are providing the desired responses. What's more, all the material will be collected, backed up and done independently by us, including the coding process in the interview. All these processes will be implemented to increase the internal validity to help our respondents accurately answer the research question.

- External validity, also called generalizability, refers to the extent to which results from a research can be applied and generalized to other people, organizations, contexts, or events (Bhattacherjee, 2012). To ensure that, multiple survey respondents and interviewees will be chosen from different age groups, gender, professions, educational level and time exposed on social media, to comprehensively display the current situation within Sweden, and even generalized to other Northern European countries.

3.7 Ethics

The ethical considerations within this study have been managed with great care, both within the survey and when conducting the interviews. The right to be anonymous is a part of the ethical concepts, no harm should be made when conducting research (Denscombe, 2018; Recker, 2012). Where "harm" in this context implies that it is essential to avoid harming the individual who is participating in the research (Denscombe, 2018). Accordingly, all the participants within the survey that none of the answers they gave could be traced back to them, hence they were anonymous. Furthermore, all recipients were informed that they could end the survey at any time. The recipients were also informed that the answers they gave were to be used within the study, which can be referred to as being transparent when conducting research (Denscombe, 2018; Recker, 2012).

Regarding the ethical preparation before conducting the interviews, since the interviews are more individual-focused (Denscombe, 2018), the participants did receive an invitation letter, before the interviews took place. The invitation letter can be seen in the appendix, furthermore, the invitation letter aimed to clarify the purpose of the interview, and hence obtain transparency (Recker, 2012; Patton, 2015). All of the participants within the interview were given the opportunity to be anonymous and their information would thereafter be handled confidentially (Patton, 2015), and there will be no possibility of backtracking. Furthermore, the interviewees which choose to be anonymous will be referred to a pseudonym within the analysis chapter. Information regarding the interviewees position will however be used in the analysis, considering the information to be important for the result of this research. Moreover, informed consent were maintained through informing the participant, before we started the interview, through the following steps:

- Only record the interview with the participants permission
- You have the right to be anonymous
- You can cancel the interview
- If there is a question you would not like to answer, you have the right to skip
- Lastly, all material will be deleted after it has been analysed. (appendix, interview guide)

Founded on these points, can one consider the ethical consideration handled with prudence. Finally there is liability, accountability, responsibility and lastly due process (Denscombe, 2018; Recker, 2012). Liability (Denscombe, 2018; Recker, 2012) will be achieved by including results which might be a contradiction towards the hypothesis within this study and by including citate from the participants in both data collections. All three authors stand behind the conducted research and therefore can be held accountable for all decisions made, and take full responsibility for conceivable cost or duties. Referring to the due process, since the research has been conducted in Sweden, the swedish laws have been followed, especially the law of GDPR.

3.8 Limitation

As mentioned by Denscombe (2008), the manner that the combination of quantitative and qualitative methodologies is liable to be fragmented and inconsistent, as it is framed by a whole variety of practical problems and demands. Even though it has been argued that such variations and inconsistencies can not be seen as unique weaknesses of the mixed method paradigm, it still needs to be stressed (Denscombe, 2008). For the specific study, the sample size of the survey could potentially be biased, seeing that the survey is sent out to the social networks of the authors here, thus, the targeted group will unintentionally be located in northern european and eastern asian countries. As for the interview, the initial plan is to interview employee work for different social media platforms with technical skills in a general way, which increases the generalizability of our study, but at the same time it can be a limitation that lacks specificity. What's more, the interview will be conducted through the internet due to the pandemic, which may inevitably decrease the effectiveness of the interaction between interviewer and interviewee. However, there were some technical mistakes in the survey, which made it possible to go through with the survey, besides the fact that the person dont use it and therefore, will one answer be neglected.

4 Findings

The results for the quantitative and qualitative data collection will be presented in the following chapter. The findings will firstly be individually presented and then merged together within the meta-inference section.

4.1 Quantitative Findings

The first question (Figure 4.1) within the survey was to make sure that the respondent actually uses MSM, and if the answer would be no, the survey would end for them. The pie chart below shows the percentage of the result, that 99.1% people do use MSM at least once a day.

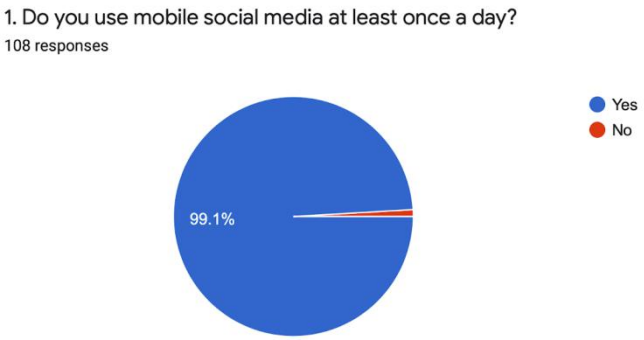

Figure 4.1: Establish that the respondents are users of social media

The initial part of the survey was aimed towards obtaining the background information of our survey respondents in Figure 4.2, including their age, gender, regionality, educational level and the number of hours spent on MSM per day.

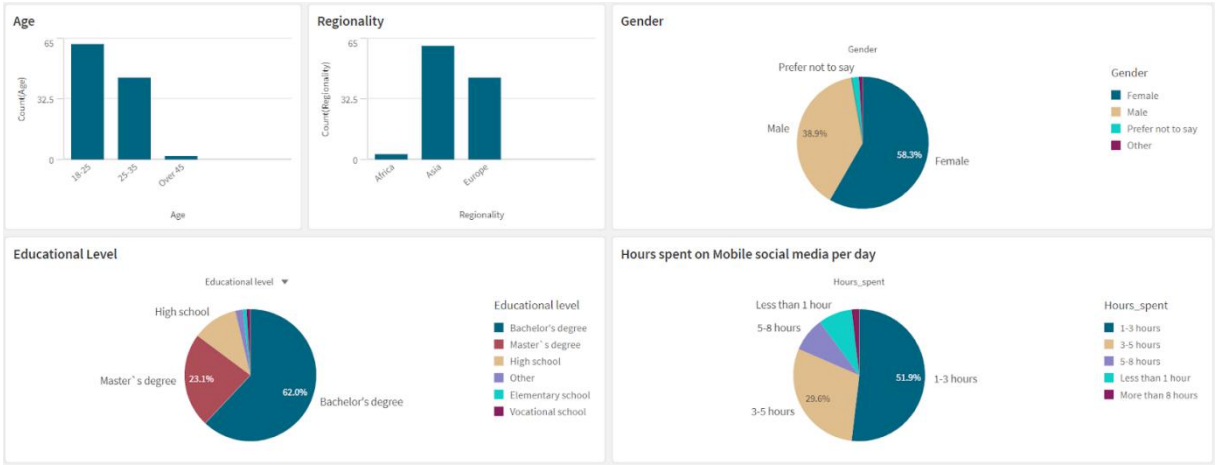

Figure 4.2: Establish that the respondents are users of social media

According to the results from question two, can one see that none of the respondents were under 18 and none were in the age range between 35-45, and only two were over 45. The majority of the respondents were in the age range 18-25, and 40.7% were in the age range between 25-35 years old. The majority of respondents were female with a percentage of 58.3% while the male respondents constituted 38.9%. There were two respondents which decided to not account for their gender, and one person where other. People from Asia constituted 56.5% of the respondents, 40.7% were European and the remaining 2.8 % were from Africa. It is therefore clear to state that the study lacks insight from North America, South America, Oceania and Antarctica. When it comes to the respondents educational level, there is some variation, but also a clear majority, 62% have a Bachelor degree. 23.1% have a master degree, 11.1% have a high school degree, 1.9% have another degree and borth Phd-degree and vocational school where 0.9 %. Based on that, the survey has managed to gather a response from all of the different educational levels.

Majority of the respondents (51.9%) spend 1-3 hours a day on social media and 29.6% spend 3-5 hours. Then, it is even between respondents spending 5-8 hours and less than 1 hour and just 1.2% spend more than 8 hours on social media.

4.1.1 Identified Anxiety-Provoking Phenomena (IAPP)

Disinformation

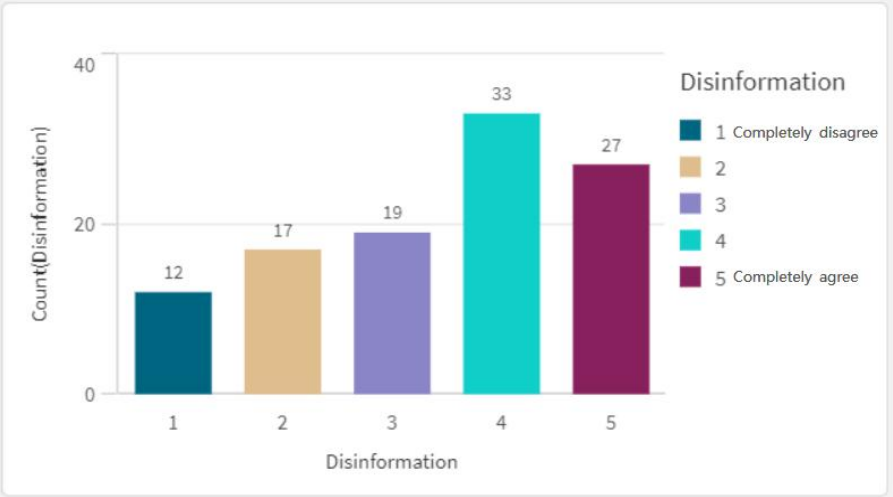

Figure 4.3: The respondents statepoint regarding the disinformation

To start with finding the IAPP, question 10 is designed to evaluate the public perception of disinformation. The question is phrased as '*Sometimes I feel anxious when being exposed to increasing quantities of fake news and false information when using mobile social media*'. The number of respondents reached 108, on a scale between 1-5 (strongly disagree to strongly agree), to what extent they might feel anxious regarding disinformation (fake news, and false information). The biggest percentage was the number four on the scale with 33%, after that there were 27% which chose number five. The least voted was number one, getting 12%, and then number two and number three ending up, somewhere in the middle with 17% and 19%.

Information Overload

Following this, question 11 is targeted in information overload, which is phrased as '*Sometimes I feel overwhelmed when there is too much information circulated on mobile social media*'. With a scale between 1-5, where the respondents had to take a stand on: whether they felt overwhelmed by the information overload. As one can see by looking at the result, there is a steady scale going up from number too to number five, from 11.1%, 19.4%, 27.4% to 29.6%. Number one, which would strongly disagree, does not fit into the upgoing scale with 12%.

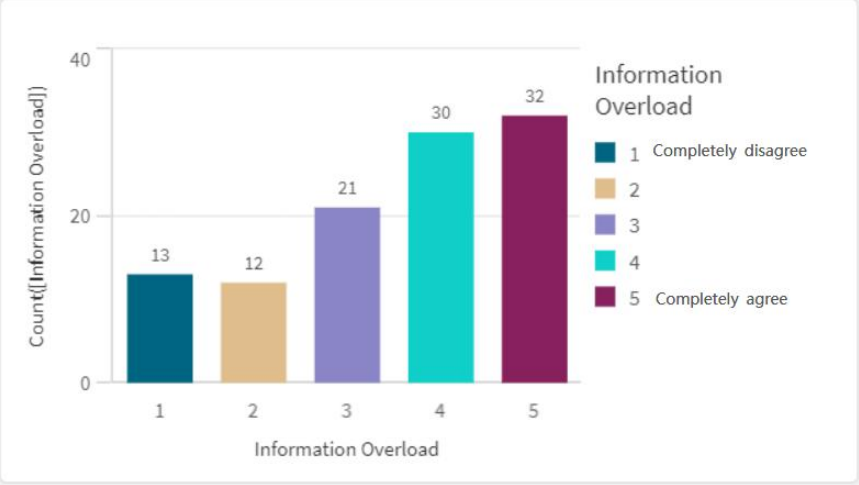

Figure 4.4: The respondents statepoint regarding information overload

Information FOMO

In the survey, two circumstances are used to describe fear of missing out information when using MSM. For question 12, '*Sometimes I feel left out when I see posts on social media about events that I didn't attend*' is also a scale, where the respondents are asked to take a standpoint regarding whether or not they have felt left out when they see posts which they did not participate in. The majority answered that they felt indifferent. There were equally as many respondents answering two and four on the scale and there were 15 respondents answering that they completely disagreed and 19 which completely agreed.

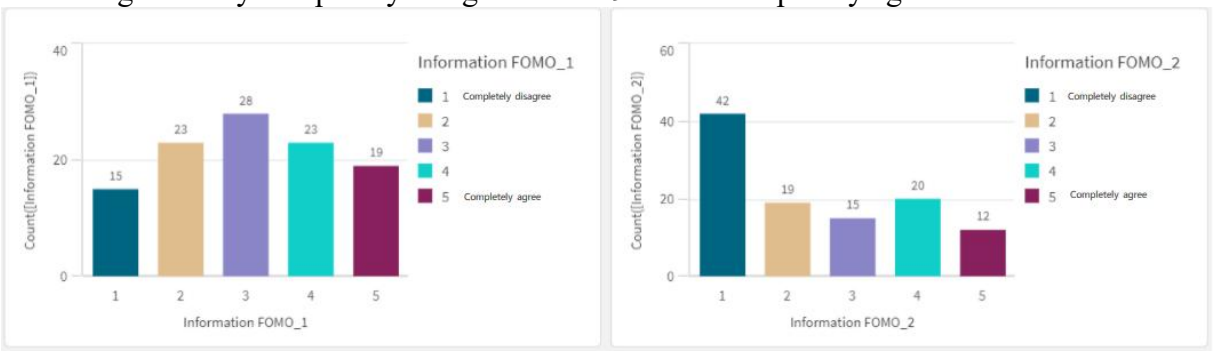

Figure 4.5: The respondents statepoint regarding the phenomenon of of information FOMO

The following question 13 continuously alludes to the information FOMO phenomenon within IAPP. The largest number of respondents answered that they completely disagreed with the statement: '*Sometimes I keep away from social media to avoid seeing posts of an event I missed*', and 19 respondents answered that they somewhat disagreed. There were 15 respondents which were indifferent, 20 respondents which answered that they somewhat agreed and 12 which completely agreed.

Information Seeking Anxiety

The survey now shifts from FOMO and goes over to information seeking anxiety and asks the respondents if they felt anxious when they were disabled to find the information they were looking for, and the question is phrased as '*Sometimes I feel anxious when I could not find the information I want when using mobile social media*'. 23 respondents answered that they completely disagree, 21 did somewhat disagree and 28 respondents were indifferent, 24 respondents somewhat agreed and 12 respondents completely agreed to the statement.

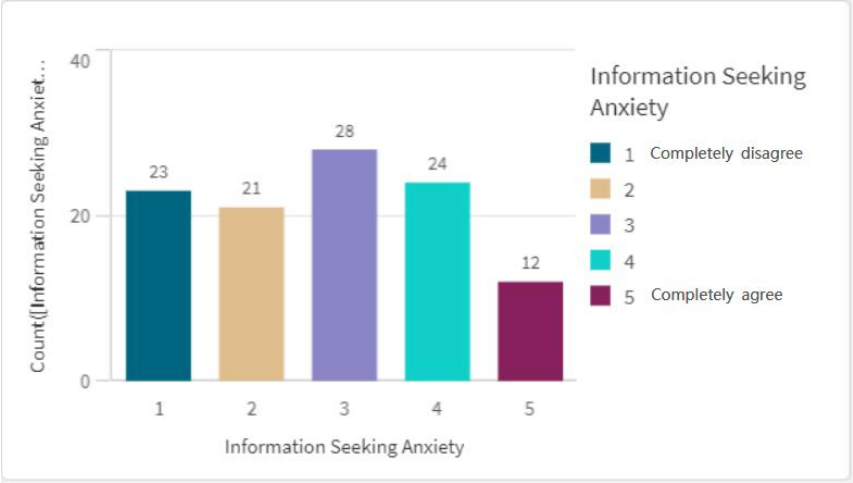

Figure 4.6: The respondents statepoint regarding the information seeking anxiety

Anxiety regarding information security

The focus shifts again, towards the next phenomenon which is information security (Figure O). 46.3% completely agreed with the statement "*Sometimes I am afraid that my personal information will be leaked*", 22.2% did somewhat agree, 16.7% were indifferent, 8.3% did somewhat disagree and 6.5% did completely disagree.

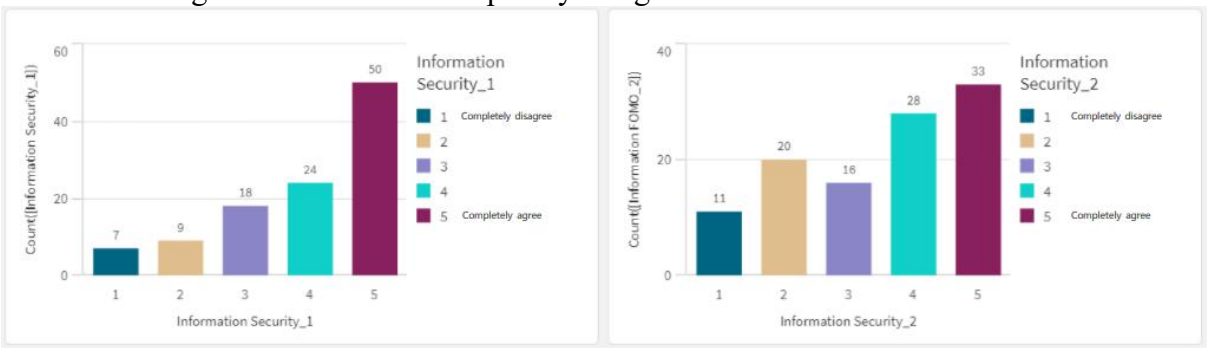

Figure 4.7: The respondents statepoint regarding the information anxiety regarding information security

The focus is still in information security within question number sixteen (Figure 4.7). 30.6% respondents completely agree on the statement "*Sometimes I feel afraid that my mobile social media accounts will be hacked*", 25.9% did somewhat agree, 14.8% were indifferent, 18.5% did answer that they somewhat disagree and 10.2% did disagree.

Anxiety provoked by technical attributes

Question number seventeen is the penultimate question with a scale and it regards whether or not the respondent has felt more anxious when using social media because of its functionality. 19.4% were completely agreeing to the statement, 24.1% were somewhat agreeing, 25.9% were indifferent, 11.1% did somewhat disagree and 19.4% did not agree with the statement.

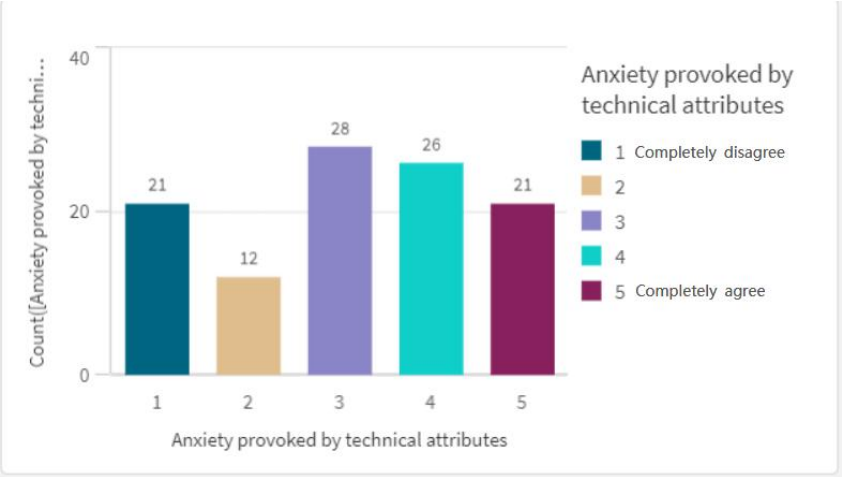

Figure 4.8: The respondents statepoint regarding the technical solution on mobile social media

Anxiety-inducing self-efficacy

The last scale question allusionates towards self-efficacy, and the respondents are asked to take a stand on whether or not they are aware that some people might be more susceptible to anxiety when receiving information from MSM. 41.7% completely agreed, 40.7% did somewhat agree, 15,7% were indifferent, 0.9% did somewhat disagree and 0.9% did completely disagree.

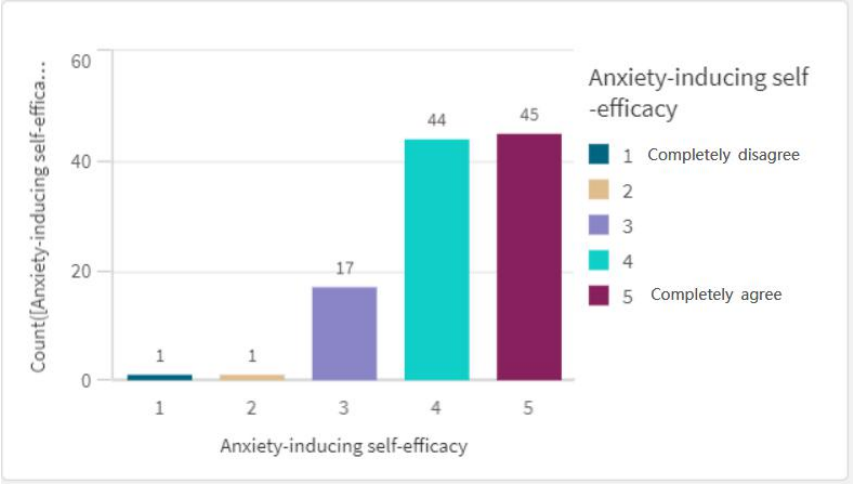

Figure 4.9: The respondent reflection on other users self-efficacy

What's more, according to the question 18 of ‘Besides the circumstances above, do you have examples of other experiences of feeling anxious when using mobile social media’, 54 respondents select the option of ‘Comparing yourself with others’, 39 respondents select ‘I worry about how many people will like/respond to the things I post’. 23 respondents select ‘It is important to impress others on mobile social media’. These three options all can be viewed as the personal traits that result from self-efficacy.

Excessive information exposure

Besides the seven IAPPs before, a new anxiety-provoking phenomena regarding the excessive time spent on MSM is found. According to our survey question 18, there are 68 respondents who select the statement of '*I feel anxious for spending too much time*', which accounts for 63% of the whole sample. One respondent emphasized that '*I feel that spending too much time on social media influences my self-esteem and thereby changes the person I am (at least for a short period of time)*'. As the significance of this phenomena is striking, the term 'Excessive information exposure' is leveraged to describe this phenomenon.

4.1.2 Hypothesis Evaluation

In order to evaluate and test our three hypotheses, Qlik was also leveraged to find the relationship between different user characteristics (age, gender, educational level and how many hours spent on MSM per day) and the IAPPs by visualizing the survey results. Presented data was manually selected according to the attributes of quantitative analysis, which should be based on an adequate number of samples. For example, there is no sample from the age group 'under 18' and '35-45', and only one respondent is over the age of 45, which may cause bias if the average score is needed. In order to improve the reliability of the quantitative analysis, it was decided to only analyze and present the age group in '18-25' and '25-35'. The same reason for the sample choosing of gender (male and female), educational level (High school, Bachelor degree and Master degree), and hour spent (less than 1 hour, 1-3 hours, 3-5 hours, 5-8 hours).

Figure 4.10: Cross analysis based on Age

From figure 14, generally speaking, the majority of respondents in the age group of '18-35' do feel anxious regarding the IAPPs, including disinformation, information overload, information FOMO and information seeking anxiety and information security issues. What's more, Respondents who under the age of '18-25' have a higher anxiety level than the age of '25-35' regarding the IAPPs.

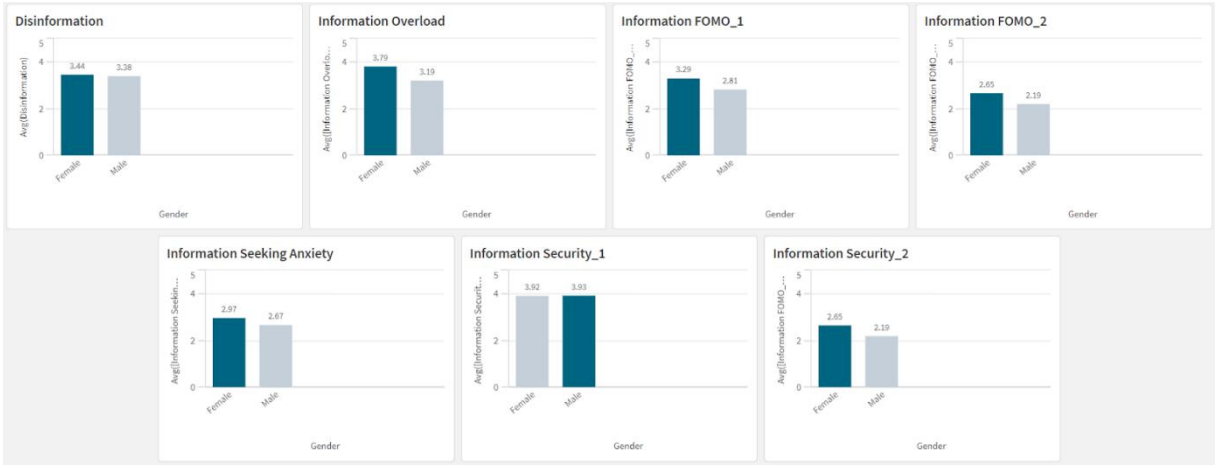

Figure 4.11: Cross analysis based on Gender

Based on gender in the figure above, it can be easily found that the average score of women is higher than men, which implies that females are more likely to feel IAPPs than males. As for educational level, by comparing the average score among people who have a degree of high school, bachelor and master in the figure below. People with higher degrees have more awareness and are more likely to feel anxious when using social media, within all IAPPs, than people with lower degrees.

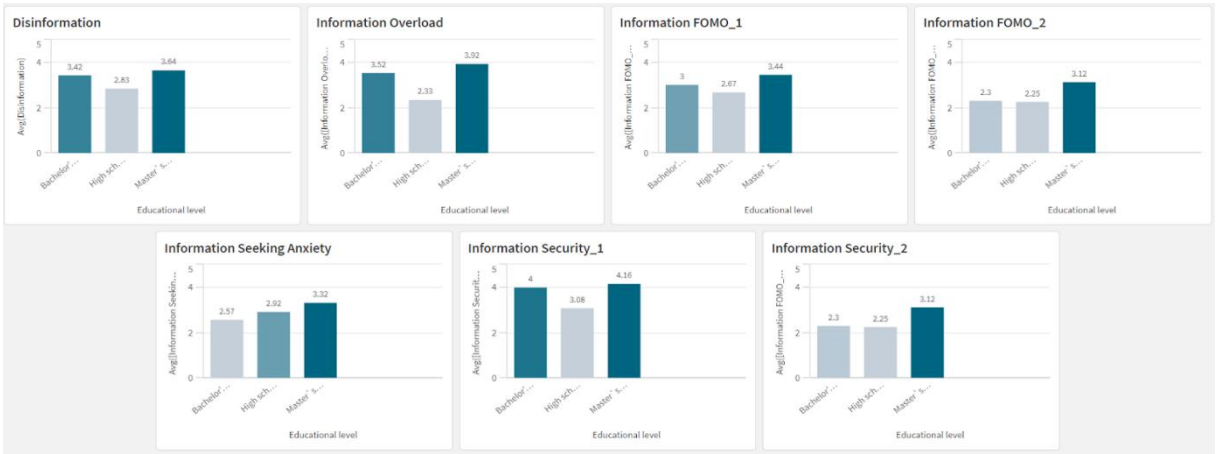

Figure 4.12: Cross analysis based on Educational level

Figure 4.13: Cross analysis based on Hour_Spent

As for the amount of time spent on MSM, the average score of the agreement of IAPPs is compared based on hours spent of ‘less than 1 hour’, ‘1-3 hours’, ‘3-5 hours’, ‘5-8 hours’. However, no formulation can be found. In other words, people feel anxious regardless of their hours spent when using MSM.

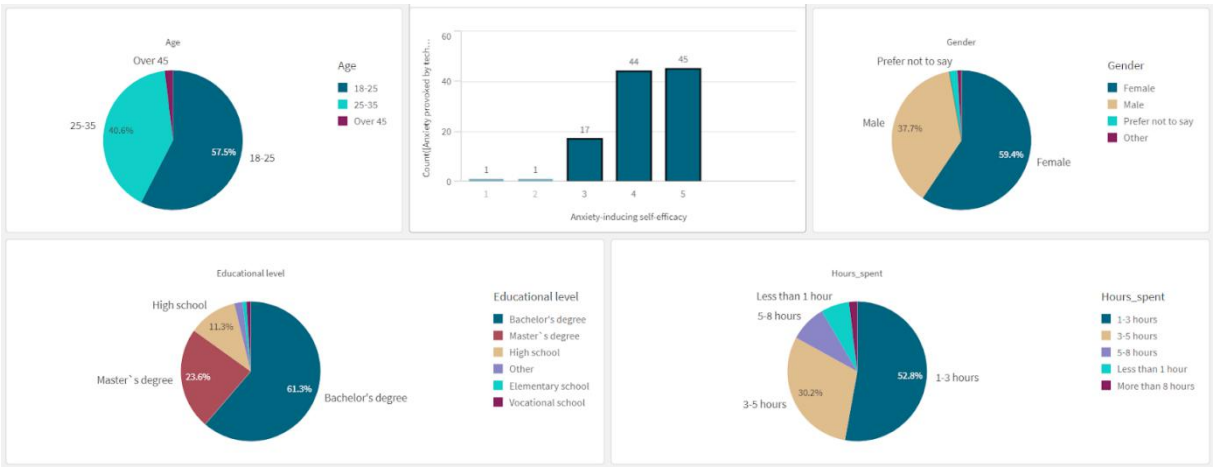

Figure 4.14: Cross analysis based on self-efficacy

The Figure 14.4 above shows the visualized result regarding the statement in the survey of ‘ I am aware that people may have different levels of abilities to be anxious when receiving information on mobile social media.’ The results show only 2 respondents disagree and are not aware of the issue of self-efficacy. Above all, after analyzing the user characteristics including age, gender, background level, hour spent on MSM per day and the perception of self-efficacy, the hypothesis 1 can be proved, is that:

User characteristics devotes how susceptible the user is to developing information anxiety as an aftermath of exposure to the IAPP´s.

According to the survey question 17 ‘*Sometimes I feel more anxious when using certain mobile social media platforms due to their functions, layouts and other attributes*.’ At least 47 respondents (out of 108) agree and have the experience of being anxious due to the characteristics, including their function, layout and other attributes. Thus, hypothesis 2 can be proved, is that:

Mobile social media and its characteristics factors contribute to the increase of IAPP, circulating on social media.

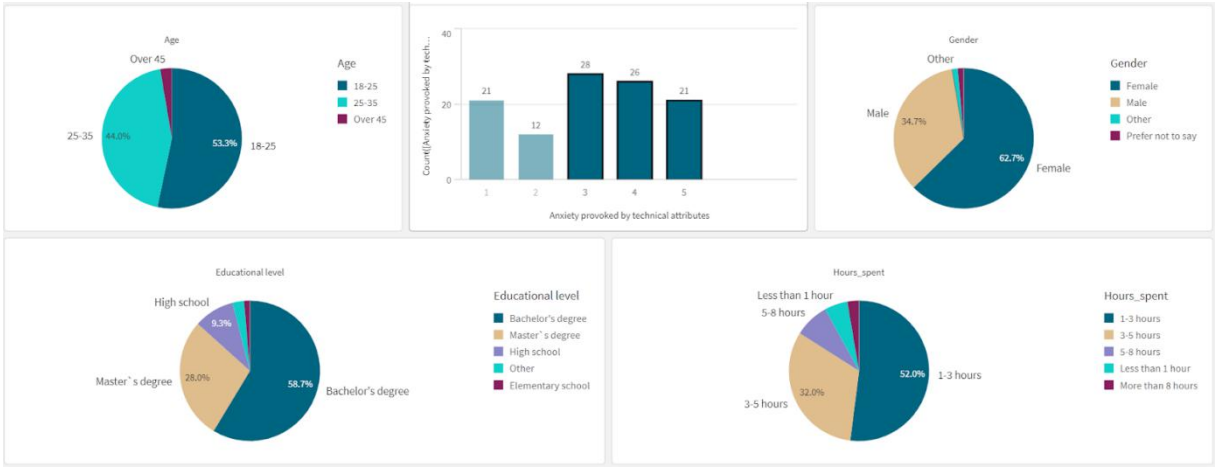

Figure 4.15: Cross analysis based on technical attributes

Based on the positive evaluation of hypothesis 1 and hypothesis 2, lays as a foundation for the evaluation of hypothesis 3, which states as: *The phenomenon of IAPP leads to people feeling information anxiety when or after using mobile social media.* Hypothesis 3 is established by the quantitative and qualitative findings where the majority of the respondents recognised themself, experiencing anxiety caused by one or more of these phenomenons. The phenomenon of: disinformation, information overload, information FOMO, information seeking anxiety, information seeking anxiety, anxiety regarding information security, anxiety provoked by technical attributes, anxiety-inducing self-efficacy and excessive information exposure within IAPP, have been proven to be a source of why anxiety. The quantitative data therefore establish the hypothesis that IAPP leads to people feeling information anxiety when or after using MSM.

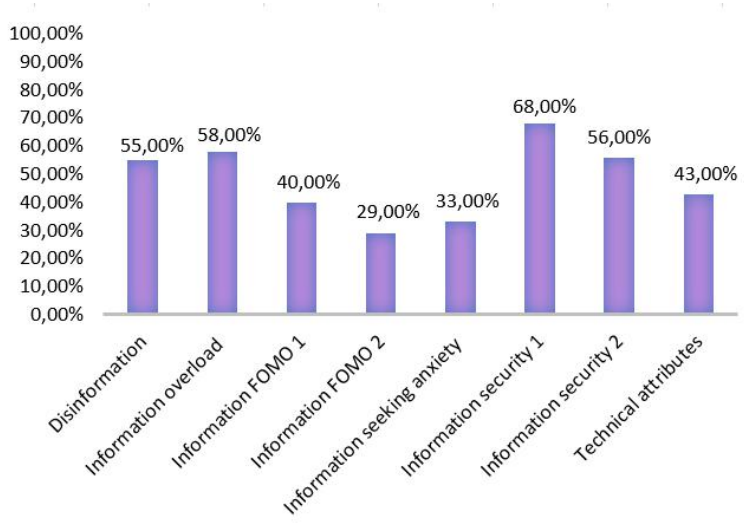

Figure 4.16: Comparison of the IAPPs

All the six IAPPs found in the survey are significant, among them, the IAPP of disinformation, information overload and information security stands out and shows the highest level of anxiety according to our respondents, as illustrated in figure 4.16. The percentage within the figure 4.16 is based on the calculation in table 4.1. The numbers are based on the questions regarding the different IAPP's within the survey and since they are scale questions, the

number four and number five one the scale where four equals agree and five equals strongly agree on the scale) is merged into one percentage.

Table 4.1: Result calculation

IAPP	Scale 4	Scale 5	Counts	Result
Disinformation	30.3% ≈ 30 = 0.30	24.8% ≈ 25 = 0,25	0.30 + 0.25	0.55 = 55%
Information overload	27.5% ≈ 28 = 0.28	30.3% ≈ 30 = 0.30	0.28 + 0.30	0.58 = 58%
Information FOMO_1	21.1% ≈ 21 = 0.21	17.4% ≈ 17 = 0.17	0.21 + 0.17	0.40 = 40%
Information FOMO_2	18.3% ≈ 18 = 0.18	11% = 0.11	0.18 + 0.11	0.29 = 29%
Information seeking anxiety	22% = 0.22	11% = 0.11	0.22 + 0.11	0.33 = 33%
Information security_1	22% = 0.22	45.9% ≈ 46 = 0.46	0.22 + 0.46	0.68 = 68%
Information security_2	25.7% ≈ 0.26	30.3% ≈ 30 = 0.30	0.26+ 0.30	0.56 = 56%
Technical attributes	23.9% ≈ 24 = 0.24	19.3% ≈ 19 = 0.19	0.24 + 0.19	0.43 = 43%

With the establishment of all three hypotheses as a fundamental base, the previous conceptual model (figure 2.1) can be seen as a conventional illustration of the user characteristics, MSM, IAPP and its relationships. Whereas, hypothesis 1 clarifies that the user characteristics devotes to IAPP and hypothesis 2 clarifies that MSM contributes to IAPP which subsequently leads to information anxiety, hypothesis 3.

4.2 Qualitative Findings

4.2.1 Disinformation

As an initial part of the interview, the respondents were asked to present their understanding and perception of disinformation. In case the respondents are not familiar with the terminology of disinformation, synonyms like fake news, tweaked news and false information were used to describe this IAPP. According to their statements, the four respondents all experienced the disinformation and have realized its destructivity. Respondent 1 shared his experience about fake information about shoes selling that target in teenagers over the telephone, and shared that number identifying can be adopted as a solution (respondent 1, row 9). Alina was confused by the information related covid-19 in Indian these days, and eager to know whether they are true or false. What's more, as a specialist on information filtering on

MSM companies, she thinks it is still hard for ordinary people to detect if it is real or fake (Alina, row 11). Respondent 3 states the area the disinformation has occupied, including journalism, science,the entertainment industry, and especially the political issue about the vaccines and lockdowns (Respondent 3, row 8). Sanja stands the point from the business side, and states that companies also spread tweaked news in order to drive sales or headlines and drive more clicks (Sanja, row 12).

Regarding the second question of '*Do you think mobile social media has accelerated this kind of problem*', the four respondents all agree. Respondent 1 and Alina explain it from the characteristics of MSM, exemplifies mobility and universality, and also easy to share information through just one button (respondent 1, row 11; Alina, row 13). Respondents 3 list the example of MSM and also state that she does not think people are aware most of the time that the information they share is true or fake (Respondent 3, row 10).

"The biggest example that I can think of for disinformation, based on people I know, is like WhatsApp, for example, ehm, like the older generation, generation X and the genera on baby boomers."(respondent 3, row 10)

As for the potential solution for decreasing disinformation on MSM, our respondents show their different ideas. The corresponding question is "*According to our survey respondents, they proposed 'to have better filters' to decrease the disinformation, what is your definition of 'filter' in your position*". Respondent 1 proposed a solution that can stop the problem at the source, is to label the account with the word like "disinformation", then decrease its transmission, or just block the account (respondent 1, row 13). In addition, according to his working experience, Artificial intelligence also can be implemented as a technology to prevent disinformation (respondent 1, row 13).

"...recently I am working on a project that uses AI technology to achieve voice interaction with our customers. Voice interaction cannot be separated from natural language understanding, every word spoken by the user should be correctly understood and given feedback. I mean, maybe this can be seen as a filter that ensures the message is corrected and spread, if the mobile social media has the function to provide voice service."

Besides respondent 1, Alina also proposed the great use of Machine Learning, one branch of Artificial Intelligence. As a alrigothm developer, she states how Weibo detects fake news using ML techniques (Alina, row 15).

"...then we have different title to label the news with 'fake' or 'real', and then we combine them together as the training dataset, then we have different title to label the news with 'fake' or 'real', and then we combine them together as the training dataset, then we can design and make the machine learning models, and then use the original data to train this model, to increase its accuracy of prediction..."(Alina, row 15)

When it comes to respondent 3, she stands from political points and views 'filter' as 'political stands', and her main filter is not following anyone that is like beyond the central line (respondent 3, row 14). This also can be reflected in the feedback from Sanja, she thinks people should have their own quotes when reading information from others sources, and people always have the right to speak up for truth (Sanja, row 16).

"It is just that, especially in North America, Canada and the US with Trump and politicians in Canada who are similar to Trump, you know, a lot of it is just people trying to get people angry by saying all these facts that are actually not the facts they are fakes. So yeah. my filter would be following the centre." (respondent 3, row 14)

"...I am very keen on always reading my quotes afterwards to demand that. Also to see that it is not tweaked in any way or that it's actually saying what I meant to say, because that is very important.Of course a journalist can always write what they want from that interview but you always have the right to always, at least, read your quotes. So if it is quoting you as a person it should be truthful and I am very keen on that and that is the closest I get to false and truth news I would say..."(Sanja, row 16)

The significant role that the government plays in preventing disinformation also is pointed by repondent 1, he gives the examples of how Indian and Chinese governments deal with disinformation on the Internet, such releasing policies or encouraging MSM to detect disinformation (respondent 1, row 13).

"...I can say that the government can also act as a filter, like there is plenty of fake news regarding political issues, mobile social media has become a game tool for political groups. I know like Indian government, it monitors social media 24 hours a day to crack down on fake news online. And our chinese government will add pressure to Chinese mobile social media companies, to encourage improved platform`s ability to detect error messages, and also implement some policies that restrict the spread of false information..."(respondent 1, row 13)

4.2.2 Information Overload

After the initial phase discussing disinformation from a their professional perspective, the respondents were asked about the understanding of information overload and its potential solutions. As the same feedback of disinformation, the four respondents all experienced the anxiety brought by excessive amounts of information circulated on MSM. Regarding the solutions, respondent 1, respondent 3 and Sanja all suggested that turning off or blocking the notifications is beneficial (respondent 1, row 15; Sanja, row 20). Alina suggested that a good recommendation system is effective, meaning the MSM will only send you the notifications or information that interested you as a targeted user, and in this way reduce the amount of information that is exposed to the user (Alina, row 19).

"...the better recommendation system? It is about pushing the information to the targeted user...if you show the things you like to the platform, then you will receive this kind of information more frequently than other information..." (Alina, row 19)

In addition, respondent 3 thought that sometimes users do not really have the choice to decide what kind of information they will receive, so people should be more strategic about what they are willing to receive, to always improve their information literacy, cause people need to be updated (respondent 3, row 18). However, respondent 3 suggested that the people, government and politicians should limit the number of postings daily by giving an example of vaccine in covid pandemic (Respondent 3, row 16).

"...So, I think that everyone should be more strategic, but you don't really have a choice. People need to be updated." (respondent 3, row 18)

"...They have kind of been doing it hastily, and with the Astra vaccine, they went back and forth and changed their minds so many times and especially with the pandemic, people and government agencies and politicians should just take me to stop constantly posting every day." (Respondent 3, row 16)

Sanja also mentioned the 'to be strategic' as a PR director who works in a Na-kd when interacting with end customers through MSM platform. Strategic means how to work with the messaging and also how to deal with the large amount of followers in different media platforms. For example, companies should regulate their behavior of releasing various kinds of information, instead of spamming, educational guidance and direct recommendation is a more valuable way for companies to reduce the anxiety regarding information overload.

"Teach them something, not only spamming to sell a product rather to give them something which is valuable. Teaching them something or giving them some recommendations… I think you have a responsibility, taking people's time like this and constantly spamming them. That is something I want to see na-kd to go towards" (Sanja, row 20)

4.2.3 Information FOMO

The following question is about information FOMO, all the respondents were asked about their perception of "*Some social media users may feel left out when they see posts on social media about events that they didn't attend or information they missed*". Respondent 1 and Alina do not really experience this problem, but both of them suggested some function that is released by some MSM is beneficial. Respondent 1 mentioned the word 'personalization', because he or she thinks the anxiety level of FOMO depends on different people, and thus suggested personalizing the interface of different users. Alina also pointed out that facebook has the function of 'tag your friends' when posting or attending some activities (Alina, row 21).

"I won't feel anxious or left out. So it also depends on different people I guess. And I think this problem is hard to solve, maybe social media can label the information and event with some keyword, or do some personalization to different users."(Respondent 1, row 17)

Respondent 3 strongly felt left out or anxious when missing some stuff in creative industry and political issues. She suggested that people will feel less anxious if they have limited time spent on social media. In addition, the record function of Zoom is mentioned by respondent 3 that solves the problem that FOMO brings to some extent (Respondent 3, row 26). *"...it is good to have limited time, and you will be more careful and probably have higher standards. It is nice when they record zoom sections..." (Respondent 3, row 26)*

Sanja also stated that '*people are all different and that we have the same type of diversity internally' (row 26)*, social media companies should take the responsibility to show what the reality is, even though 'showing the best side' become the main trends for MSM. What's more, Sanja also pointed out that '*instagram is where the largest amount of FOMO is missing out, because it is very filtered*' *(Sanja, row 26)*. *"...I think as a company, takes responsibility to actually show the ugly truth sometimes, behind the scenes sometimes to make people understand that this perfect world isn't real..."(Sanja, row 26)*

4.2.4 Information Seeking Anxiety

Information seeking anxiety has a significant impact. When respondent one got the question regarding if it is easy for the users to seek information on the platform Wangyi, his answer was yes. Respondent one also explained that it is vital to have a good interface design. Because it helps the users to quickly find the information they are looking for or what functions they want to use. Also, respondent one mentions that Wangyi gives the ability for the users to contact the workers to get the answer they are asking for (respondent one, row 19). Further, respondent one explains that making the process of seeking information for the users in Wangyi has a search function where the user can type a sort of keyword to find the function they are looking for. Also, if the user is new to the platform, the platform provides a step by step tutorial on how to use it (respondent one, row 21). *"...if the interaction is simple, it will be comfortable." (respondent one row, 21).* Regarding the platform Alina works in (Weibo), it isn't easy to find information that is not a "hot topic". Weibo specific list that contains the hot topic and news. But if a user is looking for information, image or video, it is hard. Alina explains that if the user does not store the video, it would be problematic for them to find it again. She says,

"I want to tackle or solve in the future by using more advanced machine learning knowledge, like the detection for the image, and also the audio recognition, and other artificial intelligence area, like natural language processing (Alina, row 23).

Furthermore, Both respondent three and Sanja mention that the upgraded functionality in Instagram allows the users to seek information more efficiently than usual. Respondent 3 states that having better search capabilities would make it easy for the user to seek information. Yet, respondent 3 was unsure if the users are aware of the new updates. However, respondent 3 was unsure if people get anxious if the information they are looking for can not be found. Yet, respondent 3 argues that older people get anxious when not finding the information they seek (respondet 3, row 30). On the other hand, Sanja states that the functionality in Instagram where you can hide some stories is an excellent function. However, she also describes that she needs to follow certain people in her position and have a relationship with them through social media.

"...if someone is posting something which triggers anxiety or making me feel bad, but I still need to follow that person, I think it is great that you can just shut off their posting in my feed..." (Sanja, row 37).

She also thinks platforms such as Instagram could develop more in the future (Sanja, row 37).

4.2.5 Anxiety regarding information security

During the interview, the respondent got the questions regarding *Anxiety regarding information security.* Respondent three mentioned that the government in Canada is not doing a great job regarding information security, while Europe is taking the concept more seriously since the effect of GDPR was significant (respondent 3 row 34)

"...the security and personal information and stuff, are taken more seriously in Europa. It means you know. In North America, they are reaping the benefits kind of. Facebook and

Instagram have been more transparent. If they have updated settings, then you can change some sort of things...“ (respondent 3 ,row 34)

During the discussion regarding information security, respondent three also mentioned that it would be beneficial for people to be more aware and understand how the different applications work regarding the policies. And to understand the concept would make the people feel less anxious.

"...If you can see the impacts on how your data have been put, then yeah, people would not really care if they understand how their information is used..." (respondent 3, row 36)

Furthermore, respondent one explains that social media has a large number of sorted data and will grow over time. Yet, for companies, all the data that is saved are most likely sorted in the cloud. Saving the data in the cloud makes it possible to improve the capability of information storage. Thus, to implement cloud computing, the issue regarding security will be more prominent *(respondent one, row 23).*

“....In a cloud computing architecture, security involves many layers, like people may worry their information may be leaked, its personal level, but it has more aspects, like network security, software and system security...” (respondent one, row 23)

On the other hand, Alina explains that the most important thing to her according to information security is that MSM might record the user, and in some way monitor the things the users are doing. Alina explains that she feels crept out regarding this possibility (Alina, row 33). Also, Alina explains that sharing private information such as her home address makes her unsafe (Alina, row 35)

4.2.6 Anxiety provoked by technical attributes

Anxiety provoked by technical attributes refers to the respondents which stated that some platforms were to give them more anxiety, when using it, than others, the question was thus: “Sometimes respondents said they feel more anxious when using certain MSM platforms due to their functions, layouts and other attributes. Do you have any thoughts?” Alina answered that the platform contains too much advertisement. She continued by explaining a design layout which she find to be problematic:

“... the advertisement there is big, and the button to close it is extremely small, that is to easily click the advertisement and go into another application or page by accident. “ (Alina row 55)

She ends by saying that she wishes Weibo will find a solution to this layout problem in the future (Alina, row 55). Furthermore, Respondent 3 states that one reason for people going away from Facebook is based on the interface, there are too many things going on at once and you cannot control it. The respondent also explains that he or she hates Zoom since there are too many functions and that he or she could learn but feel a strong resistance to learn. Moreover, the respondent feels that the biggest issue is the advertisement and the frequent updates. The stress the users feel while using different platforms would decrease if the updates were to be more seldom (Respondent 3, row 55). Sanja did recognise the

phenomenon of anxiety provoked by technical attributes and states that she barely scrolled down her feed anymore and that she uses social media for job purposes only. The reason for this she advocates is:

> *"... because it drives anxiety or it creates a need for getting things which I actually don't need in my life. It creates a desire for more and I am super grateful for the things I have in my life. It creates a feeling of not-gratefulness which I don't like... It is designed as a drug so either take the drug or not…" (Sanja row 28).*

Sanja also explained that she has worked so long with social media that she now knows that she is just wasting her time when she is scrolling through the feed, because the feed is full of perfect pictures of perfect lifes which in fact are not perfect. She therefore advocates that social media such as TikTok and Youtube are such huge phenomena because it is not perfect, the users can be more creative. The solution for feeling anxiety when scrolling is to stop scrolling and waste time (Sanja, row 28).

4.2.7 Anxiety-inducing self-efficacy

The following subchapter withholds answers from the question: "Do you think your social media platform ever considered that people may have different levels of abilities to be anxious when receiving information?" If their answer were to be yes, they were asked what is the solution and if they answered no, they were asked if they would like to consider it in the future. Respondent 1 states that their company has been working with this phenomenon by developing different platforms for different target groups. Young people can get a multifunctional interface with various functions while older people will have one button called "get a taxi". The respondent continues by saying:

> *"... mobile social media can implement the same solution in the future, like providing different services according to different user groups, and in that way decrease anxiety."* (Respondent 1, row, 27.)

Moreover, respondent 3 knows people that might feel anxious for posting too rarely and that would lead to people supposing that they do not care about politics or similar (Respondent 3, row 38). The respondent continues by sharing her or his thoughts on a possible solution to the stress and that would be to *"... focus on the things they do in real life or the conversation they have in real life…"* (Respondent 3, row 40). Sanja explains that the design of social media is made to trigger us and therefore does the feed look different from one to another, it depends on what we engage in. *"So yes definitely, some feel more anxiety and others and it is up to us to follow what we follow and engage in."* (Sanja, row 32). Her feed is filled with inspirational workout videos and perfect looking bodies which could lead to people feeling anxiety by comparing themselves. Sanjas solution to this problem has been to not look at the recommended feed on her Instagram, she saves the videos she wants and looks at them when she feels like it. Furthermore, Sanja believes that users need to understand the psychology behind it and then take a stand to not look at it, " *Because it is designed to trigger you so you kind of choose to either look at it and feel bad or how you want to use that information."* (Sanja, row 32). Alina thinks that the solution is to provide different services which are developed after the individual's preferences (Alina, row 47).

4.2.8 Excessive information exposure

This phenomenon refers to the users who might feel anxiety because of spending too much time on MSM and therefore get exposed in a larger way than those who spend less time online. Respondent 1 answered that he or she sometimes worries about spending too much time on social media. The person also claims that the platform DiDi lacks the time controle function since the application is only used when a person wants to rent a car (Respondent 1, row 29.) Alina at Weibo explains that there is a function within the application which limits a certain behaviour, such as spending too much time on social media (Alina, row 47.) Respondent 3 said that Apple has developed this kind of function on their Iphone but that it could be developed further.

> " *... if they had the time of people in sort of ages like if you are younger than 18 then you can only use the app for a maximum of 2 hours." (Respondent 3, row 46)*

Respondent 1 also explains that when he or she was young and were playing video games, there was a function which keeps track of how much time you have spent playing and notify you of how much time you had left, and hence restrict the behaviour (Respondent 1, row 29). However, this cannot solve the problem of people spending too much time on social media and that it is more of an individual matter, "*... everyone should be aware of the advantages and disadvantages of social media…* " (Respondent 1, row 29) according to Respondent 1. The respondent continues:

> *"... technical settings can not really solve the problem of getting anxious when using social media. I mean, if possible, the educational sector can also raise the awareness of limiting the time spent on social media, from primary school, to help people correctly understand the use of social media from their young age." (Respondent 1, row 29).*

Alina sees that designing some kind of pattern might be a solution to this phenomenon. The pattern could send a notification, change the style, color and layout within the platform. The pattern could also keep track of spent time and then suggest how many hours you have left to spend within the social media (Alina, row, 47). However, respondent 3 thinks that these kinds of functions will not be implemented because the whole point of social media is to get advertising revenue, *"... So I think they won't; they care more about making money."* (Respondent 3, row 46). The respondent ends her or his answer to this question by saying that " *I think that if people wanna use it less, One thing they can do is to do it for work..."* (Respondent 3, row 46).

4.3 Meta-Inference

Meta-inference was being used to merge all of the study's findings into one. The purpose of meta-inference is to develop a rich discussion. Since the qualitative method aimed to investigate emerging phenomena from the qualitative data analysis, the table 4.2 does not include the context background. Furthermore, the interviewees in the qualitative data collection were only four and the majority of them wanted to be anonymous, which resulted in inadequate responses for developing qualitative inferences.

Table 4.2: Meta-Inference

Context	Quantitative inference	Qualitative inference	Meta-inference
Background			
Age	People between 18-25 feel disinformation, information overload, Information FOMO and information seeking anxiety.		No conclusion and relationship can be obtained.
	People in the age range 18-25 and 25-35 have the same anxiety regarding information security.		
Gender	Females are more recipient to feeling IAPP.		
	There is no relation between the hours a user spends on social media and their anxious level.		
Educational level	People with higher degrees have more awareness and are more likely to feel anxious when using social media, within all IAPPs, than people with lower degrees.		
Regionality	People feel anxious regardless of their regionality when using mobile social media.		
Mobile social media	Mobility and Universality		
	There are many daily users of mobile social media.		

	Some mobile social media contributes to more anxiety than others.		
IAPP			
Disinformation	Fake news and disinformation is a problem, where 60 of the respondents feel anxious regarding this phenomenon.	According to all respondents, disinformation is problematic. The respondent also feels anxious when there is fake news or false information.	Disinformation is an urgent phenomenon which makes people feel anxiety, and should be managed accordingly.
	Some of the respondents mention that a solution could be a “better filter”.	Artificial intelligence can be a solution, including Machine Learning, Natural Language Process, and Voice recognition could be a solution for some platforms.	A solution to this phenomenon could be technical, management and individual.
	Some of the respondents suggest that krypted information and internet policy department should be developed.	Government policies can be implemented to regulate the disinformation online.	
		Educational sector can preach people to correctly use mobile social media at a young age.	
		Block the account that spreads disinformation or just spend less time on mobile social media.	

Information overload	People feel anxious for spending too much time on mobile social media, where 62 respondents answered that they feel anxious because of the information overload.	Information overload can make people more anxious and confused.	Information overload is an urgent phenomenon which makes people feel anxiety, and should be managed accordingly.
		A technical solution would be to develop a better recommendation system.	A solution to this phenomenon could be technical, management and individual.
		Individuals and companies need to be more strategic about what kind of information they tend to receive and release.	
		Improve personal information literacy.	
		Political and governmental regulation of limiting information released per day.	
Information FOMO	56% of the respondents do not keep away from social media to avoid seeing posts of an event they missed,	Information FOMO exists in different people.	Majority of the respondents and interviews do not really fall into Information FOMO, but it is still a problematic IAPPs that need solutions.
	29.6% of the respondents do keep away from social media to avoid seeing posts of an event they missed.	Personalization design for users according to their preference	There is no overlapped solution to information FOMO.
	38.9% of the respondents feel left out when they see posts on social media about events that they didn't attend.	Implement Anti-FOMO function like 'tag your friends' and functionality for recording	

	35.2% of the respondents feel don`t left out when they see posts on social media about events that they didn't attend.		
Information seeking anxiety	33.3% of the respondents feel anxious when not finding the information but 40.7 % did not recognize themself getting anxiety for not finding information.	It depends on what social media platform the user is using. In some platforms, it is easy to seek information, but in others, it is complicated. When it is complicated, it makes the user anxious.	The phenomenon is not an urgent IAPP but it is still an important matter.
		AI, audio recognition could be implemented to facilitate the seeking of images and videos.	There is no overlapped solution to information seeking anxiety.
		Good interface design is beneficial for finding the information easily.	
Anxiety regarding information security	68.5% of the respondents are afraid that their personal information will be leaked.	People need to be aware and understand how social media applications use their personal information to decrease anxiety.	Anxiety regarding information security is an urgent phenomenon which makes people feel anxiety, and should be managed accordingly.
	56.5% of the respondents are afraid that their social media accounts would be hacked.	A technical solution could be to develop better databases and cloud computing.	There is no overlapped solution to anxiety regarding information security.
Anxiety provoked by technical attributes		The interface of certain platforms is one reason for decreased usage.	No conclusion and relationship can be obtained.
		The frequent updates and advertisement is also a reason for decreased usage.	

		Mobile social media creates a feeling of ingratitude and a way to waste time.	
Anxiety -inducing self-efficacy		One solution is to develop different interfaces based on target group and individualistic preferences.	No conclusion and relationship can be obtained.
		One solution could be to focus on real life and stop using mobile social media.	
		The individuals are responsible for decreasing their anxiety and therefore could one solution be to control the feed by overhauling what they follow and engage in.	
Excessive information exposure		Some platforms have developed and implemented a time control function but the function could be further developed to be more effective.	No conclusion and relationship can be obtained.
		Technical solution is not the solution, it is an individual matter.	
		Companies might be unmotivated to develop a solution because they want revenue.	

5 Discussion

The discussion consists of two main areas, where firstly the authors discuss the findings and connect the IAPPs to the theoretical framework. Then move on discussing the findings for information system oriented solutions for decreasing the information anxiety.

5.1 IAPPs

This study uses the relationship among MSM and its user that presented in the conceptual model (see Figure 2) to explore the Identified Anxiety-provoking phenomena (IAPP) based on both the respondent survey and literature review. The results are used to identify and generate more insight into the eight IAPPs, described as disinformation, Information Overload, Information FOMO, Information seeking anxiety, Information regarding information security, Anxiety provoked by technical attributes, Anxiety-inducing self-efficacy and Excessive information exposure.

The discussion will be tightened to the sample data, namely the background information of 108 survey respondents and 4 interviewees. The eight IAPPs were mainly clued from the survey respondents that were mainly aged from 18 to 35, the majority of the samples were from Europe and Asia, the educational level of the respondents were high school, bachelor and master students. The sample characteristics will be highlighted in both the findings and discussion, as well as the information of four interviewees, including their companies, positions and also experience. Based on their perception of information anxiety on MSM, the IAPPs were divided into three categories, namely accentuated, underestimated and accidental phenomena according to their level of recognition and emergency.

5.1.1 Accentuated phenomena

After analyzing the data connected to the eight IAPP, information security, information overload and disinformation can be seen as the most accentuated phenomenon as figure 4.16 shows in chapter 4.

Information Overload: Regarding the literature review, there are some negative side effects when using social media, as previously mentioned by Bala et.al (2021) and one of them is information overload. The definition given by Beaudoin (2008) and Bala et.al (2021) is not considered to overlap the findings in this study. Their definition of the phenomenon was that a person cannot process all the given information and communication, but the findings within this study imply that it has more to do with the constant updates and how to reach out. For example, Sanja did state that the companies should teach the consumer something and not push out information just for the sake of it. Sanja did explain that the reason behind this is

because she had read in a study that companies only have a limited amount of seconds to get their information across. Nevertheless, Respondent 3 explains that they don't have a choice, people need to be updated. To compare these two perceptions, there is no choice and the time is limited, would it not be in the company's interest to take Sanjas' standpoint into consideration.

62% of the respondents from the qualitative data did agree that they have felt information overload and all of the respondents in the quantitative data did also agree which makes it clear to state that this phenomenon is urgent. The qualitative-inference also shows that there are some possible solutions to deal with this phenomenon but that none of them are implemented. Nevertheless, there might be some social media platforms which have implemented solutions, it is therefore unjustified to say that no social media platforms are using a solution towards information overload. The meta-inference is therefore that a solution could be technical, management and individual (see table 4.2). The meta-inference, after analysing the qualitative and quantitative data, is that this phenomenon is urgent and that people do feel anxiety because of this, which corresponds to Hoq (2016) perception.

Disinformation: The importance and prevalence of it has been ardently discussed and acknowledged in literature in recent decades (Egelhofer & Lecheler, 2019; Bunker, 2020; Huynh, 2020; Apuke & Omar, 2020). As Humphreys (2013) mentioned, the mobility and changing nature of MSM has accelerated the spread of disinformation through sharing. Apuke and Omar (2020) also suggested that new ideas were permitted to interact and diffuse in MSM due to its popularity and universality, which is troublesome nowadays. Consequently, MSM users are invariably exposed to an uncontrollable type of information, especially news that is coming from unknown sources (Apuke & Omar, 2020). The same results can be obtained from our interviewee Alina and respondent 3, who are not aware that the information they shared through MSM is real or fake, as Egelhofer and Lecheler (2019) suggested, disinformation sharing may be unintentional or highly intentional. However, in this digital world, all the interviewees admit that MSM is now increasingly a place to disseminate disinformation and fake news.

From the quantitative results from the survey, obviously, disinformation can be seen as one of the most serious IAPPs that largely yields anxiety on the respondents, that the anxious level of their perception towards disinformation is quite high, which shows the consistency with the predecessors' research (Egelhofer & Lecheler, 2019; Huynh, 2020). What's more, the large context of disinformation was realized by us while whistling the feedback from our respondents. According to the interviewees (R1, Alina, R3 and Sanja), the topics and sources that cause disinformation are various, including the life and advertised information, political news, health guidance, and untested information in all kinds of industries. For example, Rampersad et al (2019) stated that some government officials and political leaders are even engaged in the proliferation of misinformation to a large audience to suit their agenda. What's more, during the covid-19 pandemic, disinformation in MSM has fuelled panic and anxiety among people, which is also mentioned by Alina regarding the concerns of the pandemic in India these days. In addition, respondents in the survey also mentioned ‘deep fakes’, a synthetic media using face swaps with little trace of manipulation (Westerlund, 2019). Deepfakes is more convincing compared to other disinformation, which can quickly reach millions of people and results in harmful consequences to individuals. However, research has shown that scholarly research on the topic is sparse, but more methods need to be identified to fight against it (Westerlund, 2019).

Anxiety regarding information security: Most of the respondents from the survey are afraid that their personal information will be leaked and that their account will be hacked. As mentioned in the literature, internet hacking is a common threat against the user's security. Yet, the user lacks understanding and knowledge regarding information security (Elhaia & Hall, 2016; Zhang & Gupta, 2018; Saridakis, Benson, Ezingeard & Tennakoona, 2016). Also, respondent three, who participated in the interview, argue that the government, specifically in Canada, is not doing a great job regarding information security and making the users within social media aware of it. She or he also mentioned that there is a difference between Europe and America on handling information security. GDPR in Europe has become a significant priority where most people are aware of it. Furthermore, respondent three mentions that the users need to gather more information on how different MSM platforms can be used and how their personal information will be used. With having the correct information and understanding, the user will be less anxious and less afraid.

The information shows that users are anxious and afraid regarding information security and the leak of their personal data because they do not have the proper knowledge and awareness of how their personal information can be used. As Zhang & Gupta (2018) explains, hackers and cybercriminals might harm the users where misinformation can be spread, and people's private information can be leaked. This will for sure create an uncertain environment which can later contribute to anxiety and fear. However, it is essential to try to make people aware of information security and how social media platforms handle the user's personal data. Respondent three mentions that perhaps having customizability on different social media applications would probably make people more aware. Making people more aware will increase their anxiety and fear. However, it is hard to know if people are willing to read all the information regarding information security and how all their personal information is or will be handled. Of course, it can be creepy to be aware that social media have an ample storage of information saved about each user (Alina, row 35 and respondent one 23). Thus, it is problematic that users are afraid and feeling unsafe when using MSM. After analyzing this phenomenon, the results show that information security is the most common phenomenon that leads to anxiety and fear, thus, it needs investigation (see figure 4.16).

In sum, information security, information overload and disinformation is an urgent IAPP that the spread of it could jeopardise the safety of people by provoking anxiety, which is acknowledged by the meta-inference. The solutions are also obtained according to the answer from interviewee, which will be discussed in the later chapter.

5.1.2 Important but heretofore not accentuated phenomena

Besides the IAPPs of disinformation and information overload, there are three IAPPs left that are mentioned in the literature view in chapter 2, which are important phenomena which should be taken into consideration. However these following phenomena (Information FOMO, Information seeking anxiety and anxiety regarding information security) are not as accentuated as the previous three phenomena, according to the survey respondents.

Fear of missing out information: A problematic phenomena since much information is circulating (Hayran, Anik & Gürhan-Canli, 2020). Also, in some research, people are addicted to sharing information, especially on different social media platforms. Thus, it might bring anxiety or confusion, which makes one avoid the use of social media (Hayran, Anik &

Gürhan-Canli, 2020). The result from both the survey and the interview seems to be similar. Regarding the survey, most of the respondents disagreed with avoiding the use of MSM (see meta-inference). Yet, the other respondents (29.6%) answered that they agree and strongly agree that they avert and prefer not to use social media, not to see the things they have missed. As Hayran, Anik & Gürhan-Canli, (2020) mentions, some users might avoid using social media not to see what they have missed but also to avoid the feeling of being anxious Some of the respondents answered that they have no experience of information FOMO and some of them do avoid social media because of the information FOMO. In addition, respondent one explains that people are distant because they feel and experience things differently. He or she used the term "personalization" to explain that the level of anxiety of FOMO is different. This argument shows that the definition of "personalization" is true. The literature and the answers from the surveys and the interview show that people experience this element differently.

However, it is not only about avoiding social media when missing out on information but also the feeling of being left out. Respondent three explains her experience where he or she strongly felt left out and felt anxious when she or he misses an event of her interest. She, later on, added that the user would probably limit themself from using social media. With that, the anxiety level would increase. The results from the collected data show that people might avoid social media not to feel anxious. The result shows that the users might compare themself with others, which makes them feel left out. People avoid social media to not feel anxious. Thus, it can affect their self-esteem. However, this phenomenon is not urgent, yet it still needs investigation to not become a bigger problem in the future.

Information seeking anxiety: Moreover, when analysing the meta-inference regarding the information seeking anxiety one can find similarities within the presented literature review of the phenomena. Erfanmanesh, Abrizah and Karim (2012) firstly used the term 'information seeking anxiety' (ISA) to define the feelings of discomfort that an information seeker experiences while seeking the needed information. However, the previous research mainly focused on ICTs proficiency as the potential determinant of different levels of anxiety (Naveed & Anwar, 2019). Also, certain personal and academic variables also contribute to the different levels of anxiety regarding ISA (Naveed & Ameen, 2017a), exemplified in respondents' age, gender, educational level, which have all been proved according to our survey results. Also, as respondent 3 mentioned, old people tend to feel more anxious when having trouble finding information they want, which can be further argued that older people lack skills that are associated with information and communication technologies (ICTs) compared to younger generations. In addition, MSM, as one of the ICTs, Alina mentioned that some certain MSM platforms provide interfaces or functions that have aggravated ISA, because it increases the difficulty of information seeking, in other words, increasing the level of ICTs proficiency.

Besides the relevant factors that contribute to ISA, one more extra finding is that the types of information seeked also matters. Generally speaking, our survey respondents and interviewee do not really feel ISA when searching for text-based information when using MSM, and admit that with the help of functionalities that platform provides, such as the search function by typing key words, people with good ICTs proficiency would be hard feel ISA when using MSM. However, respondent 2 mentioned that it is suffering to seek information in the forms of images, audio and video on MSM. With the increasing thirst for information nowadays, the form of information people tend to seek is no longer limited to characters. Here augured, ISA in the context of MSM should also consider the different forms of information, like images

and video, and formulate the corresponding function or services that could reduce the anxiety regarding ISA.

5.1.3 Accidental phenomenons

The following three phenomenons emerged when analyzing the quantitative data and were then further investigated. Consequently, these three phenomena were not rediscovered within the theoretical framework nor the quantitative findings, hence they are accidental.

Anxiety-inducing self-efficacy: When analysing Anxiety-inducing self-efficacy can one see that the result displays that 80.6% (See appendix 2, question 19) of the respondents agreed that some people might feel more anxious than others when receiving information from social media and therefore this phenomenon was created and included in the interviews. The interviews showed that some MSM is taking this into consideration when developing the interface. Respondent 1 explained that the social media which he or she is developing are making different interfaces based on the user's age. This technical solution is the only implemented example gathered from the interviews, the other respondents advocated that is up to each individual. Respondent 3 and Sanja believe that people should focus on the real things in life, meanwhile Alina believes that there are different solutions which social media could implement to deal with this phenomenon. The different views on this phenomenon, that it could be solved by technic on one hand but on the other hand it is a indivilistical matter, could depend on the different backgrounds. The two respondents who believed that there are technical solutions are working with software development and the two others work within marketing, it seems to be a matter of perception. Nevertheless, there is a deficiency of data to develop a meta-inference for this phenomenon.

Excessive information exposure: the last IAPP, was also created by the quantitative data, where a number of respondents stated that they feel anxiety for spending too much time on social media (See appendix 2, question 18). There were some solutions found when asking the interviewer about this phenomenon, such as behaviour limitation and time tracking. The fact that there is some technical solution implemented already makes one wonder what the quantitative data respondents were referring to. Are the quantitative respondents not aware of the technical solutions or are they not powerful enough or what could contribute to such condescending views. Nevertheless, all of the respondents within the interviews were not united. Respondent 1 clearly stated that technical settings are not the solution and it is an educational matter. Respondent 3 believes that companies are unwilling to implement these kinds of solutions because they would lose revenue and that people should work with it, then they would lose interest in using it. To work with it might be a solution but not everyone can work with social media, there are other important employments out there. However, the point Respondent 3 wanted to make might be that one should move on from seeing social media as a source of entertainment and hence, goes together with respondent 3 statement, that it is more of an educational matter. The education could be to teach people awareness about the effects of social media which might result in less usage. Nevertheless, there is a deficiency of data to develop a meta-inference for this phenomenon, however, it is up to our belief that this matter needs further investigation.

Anxiety provoked by technical attribute: The IAPP of Anxiety provoked by technical attributes is not strictly accidental as the other two IAPPs. The hint has been given as an assumption from the authors that technical attributes might be a reason that provoke the

anxiety and thus set the question 19, and the survey result shows the positive fitting, which enables the authors to view this as one of the accidental phenomena. The origin of this phenomenon emerged from question 19 (figure 4.16) where 50% of the respondents agreed that they were feeling anxiety because of some certain MSM platforms, and from question 18 (appendix 1) where some of the respondents replied that they experience hate when using certain platforms. Moreover, the respondents within the survey advocated that they have felt anxious because of the technical attributes within certain platforms, which could be connected to the same statement in question 19. Moreover, some of the respondents answer in question 21 (appendix 1) that social media platforms should turn off infinite scroll, notifications and improved filtering. These discussed findings were found to be hard to connect to one of the IAPP's discussed within the literature review which led to the creation of this phenomenon. Nevertheless, this kind of phenomenon might be found within established research already and one should take into consideration that this designation of this identified phenomenon is not conventional.

The phenomenon was described to the interviewees, and was recognized by Alina which explained that some advertisements within certain platforms have a small close button which makes it hard to close down the advertisement, and the close button is not always a close button, the button might redirect the user to another site. However, Alina does not mention by words that she feels anxious because of this. Respondent 3 believes that people feel stress because of the frequent updates which might also be a part of the anxiety which is provoked by technical attributes. The same respondent does however feel that some people are moving away from certain MSM because of the functions and believe that the applications with less functionality are easier to use. Sanja did also recognize this phenomenon and explains that when she is scrolling down her feed of Instagram, she feels anxiety and a need for getting certain things. A feeling which she does not appreciate and therefore she has stopped scrolling. Nevertheless, since the phenomenon occurred after analysing the quantitative data, and were not investigated within the literature review within the study, is the meta-inference that no conclusion and relationship can be obtained.

5.2 Solutions

As Marabelli Vaast and Li (2021) mentioned, the IS community is well positioned to study and prevent scars that technology exerts on human beings. Here the authors argue information anxiety is a scar that exerts on people resulting from using MSM as a technology to receive information nowadays. At the same time, understanding the benefits of technology also requires an awareness of potential harms, which is something IS researchers are trying to pursue. In this section, the author is going to take a substantially critical stance in examining the ubiquitous role of IT in contemporary society regarding the solution to information anxiety on MSM. The solutions are IS-oriented and are clued from the interviewee and meta-inference, which require the contribution from MSM organization, developer, government, and individuals. Thus, the solution in this chapter will be divided into three aspects: technical, managemental and individual level.

5.2.1 Technical Level

In this study, technical solutions refer to one that requires a change only in the techniques of the computer sciences, without changing in human values or ideas of morality. Technical implementation has been suggested by Thatcher et al. (2007) that is useful to provide reliable and useful solutions and giving users resources to support their use, and thus reduce anxiety through the internet. Based on the findings from the interview, it shows the technique of Artificial intelligence has a great leverage on handling the information anxiety in MSM. Disinformation as one of the accentuated IAPPs, largely benefited from the AI with its ability to analyze vast amounts of unstructured data, which helps to tell apart information from fake to real. In order to analyze the news content itself and flag dubious content, Machine Learning algorithms and tools can be leveraged to predict the factuality of reporting and bias of various news sources. Besides machine learning, the type of emotions in disinformation also can be identified by using the technique of natural language processing, which is devoted to understanding the meaning of text and to detect language patterns, and thus tell fake and real news apart from emotional dimensions.

However, as Alina mentioned, it is always hard for people to tell apart the real and fake news content from an unknown source. AI can barely promise accuracy with hundred percent when identifying fake news. Here, the authors discuss human inputs should be combined with the implementation of AI, and when they in conjunction, human approaches to fake news identification can be augmented by AI. It is also important to enforce processes that keep humans in the loop regarding the ethical issue brought by AI, even if it may result in low efficient processes, because of human supervision. All in all, armed with advanced techniques of AI/ML, MSM can be more effective and efficient at solving disinformation. In addition, respondent 1 also mentioned AI is useful to dealing with the IAPP of Information overload, as personalization can be achieved by AI/ML to limit the number of information and notification, people can only receive information that interests and attracts them, which will largely decrease the amount of information received per day, and thus decrease the anxiety. As the IS community already has the intention and opportunity to join the important conversation of AI/ML and examine in detail the reliability of its implementation within organizations, the authors here believe that AI/ML can be greatly leveraged to migrate the problem of information anxiety.

Human computer interaction is another sally port that plays an important role when addressing information anxiety on MSM when it comes to the technical level, which can be reflected by what Beckers & Schmidt (2001) suggested about HCI in computer anxiety. Good interface design is mentioned by all the four interviewees when talking about the IAPPs of Information seeking anxiety and Anxiety provoked by technical attributes. Simple and clear interface of MSM will be beneficial to find the function and information easily, and thus decrease the anxiety of feeling helpless when users can not find the wanted information at once. Good interface design will also improve the user-friendly level and thus ease anxiety. In addition, the concept of gamification as one of the sub-area of human computer interaction, which awakens curiosity from users and also creates a sense of control. Here the author discusses the more gamified approach implemented on the design of interface, the user will feel more involved and encouraged to experience the MSM, and thus decrease the anxiety to some extent.

According to our survey respondents, the increasing popularity of accessing social media using mobile devices has also attracted the negative attention of cyber security, which greatly provokes anxiety on MSM users. Information security issues like information disclosure and different privacy issues are always harming innocent users. In addition, online fraudsters are frequently using the vulnerabilities of social media networks and implementing damages to targeted MSM users, who are unable to confirm or resolve the issues of privacy and trust online. Like the survey respondents mentioned, sometimes they are afraid of their social media accounts being hacked and worried about their personal information being leaked. Regarding the technical solution, interview respondent 1 and Alina proposed updated security technology and software are beneficial, including advanced databases, also like firewalls and antivirus which are vital on MSM as well in order to avoid threats. Security professionals also need to implement secure gateway technologies that can be vital for reducing the risks of data loss and information leakage.

Different MSM can also contribute to the migration of information anxiety according to their own platform setting and attributes. From the data collected in this study, the author found that different social media platforms have their different ways of dealing with information anxiety. For example, some of them let the users set different privacy settings in case of leaking personal information, some of them provide service or functionality like presenting a comment box to let users express what they have been concerned about when using the platform. Here the author proposes that MSM platforms need to recognize the basic aspect of human social interaction and identify intuitive and strong service or functionality in the technology level that can handle the challenges brought by information anxiety.

5.2.2 Management Level

Management solutions here refer to the measure that an organization can take to prevent information anxiety on MSM at the management level. From the collected data, the organization here can be MSM companies, government, and also the official sites who feel involved like WHO. Due to the analyzing part of the qualitative and quantitative data and the outcome from meta-inference, management solutions were suggested and discussed.

Here the author argues that management solutions are efficient for decreasing the negative effects of all the IAPPs. For example, Albrechtsen (2007) explains that it will not be a holistic approach without a clear understanding of the phenomenon of information security. The security awareness for the organization who establish the MSM is significant. However, some MSM companies may deliberately avoid facing the challenges caused by anxiety regarding information security. Like respondent 3 strongly argues that "I don't think there would be a balance between security and privacy with anxiety. I think it is just about profit the priority goes." (appendix, 8). Respondent 1 also argues that the adoption of "customizability" in different social media platforms. But the provocative part of implementing "customizability" would create a significant barrier for companies that decline ad revenue (appendix, 6). However, most of the MSM companies mentioned in this study are aware of the responsibility that they need to always care about the mental injury that they may accidently exert on their user. For example, respondent 2 mentioned the organization she has worked at had developed personalized, interactive, and engaging approaches that pay close attention to their users, and the whole management team would have meeting conferences per week to reach the feedback from their users constantly, including their anxiety issue. Here, the author argues that MSM companies should always realize their social responsibility by seeking feedback company-

wide and coordinating with a range of stakeholders across legal, compliance, operations, and finance to ensure that adequate attention has been placed on the IAPP of their users. This also includes training the awareness of the employees of different MSM organizations, which can be immensely helpful to keep the social media users mentally safe from the information anxiety.

Besides MSM organizations, the government also can be the stakeholder and the one who takes actions, as well as some official sites. Take the example of disinformation, the government is able to implement policies that are assertive in taking preventive and deterrent action against disinformation transmitted in MSM, in order to enrich people with awareness who lack the capacity to discern false information, and also legally add pressure to the MSM companies that pay attention to the mental problem of their users. Official sites like WHO also play a vital role in encouraging people to regulate their behavior in a healthy manner, providing scientifically based health information to users to correctly use MSM. It is also applied in terms of information security issues, respondent 3 explains that the Government in different nations has a different level of sharing policy and security awareness. Specifically, he or she mentions Canada and Europe. The Government in Canada does not put a lot of effort into creating an environment where information security is visible. In contrast, Europe has GDPR, where they usually send surveys and information to the users to fulfil and share policy awareness. On the bright side, GDPR as a concept is starting to increase, and many companies are adopting it. However, here the author also argues that if there is non-compliance in face of such governmental communications, robust legal action needs to be implemented with imposing penalties to deter misbehavior actions.

This is also pertinent for the educational sector to implement policy or lectures to discourage such anxiety-inducing behaviors and to make the required amendments to course design by leveraging the positive aspects of social media platform usage. As the survey data shows, the younger generation tend to be the primary audience of MSM, at the same time, they are easily influenced by information circulated in MSM. Here the author argues that MSM platforms should be incorporated into college courses or online learning platforms as supplementary media to mediate instruction for people in their young age, and thus migrate the anxious effect of information anxiety when using MSM.

5.2.3 Individual Level

To start with the discussion on the individual level, the author here wants to encourage everyone to perceive that one must come to terms with the fact that social networks cannot secure their own environments, not to mention yours. Individuals should be aware that one can play a significant role to secure our future regarding information anxiety, spreading the awareness for creating a balance between information anxiety and correct use of MSM, and thus incorporating proactive changes in the contemporary environment.

Besides contributing to the overall situation of information anxiety on MSM, here the author argued that individuals also should learn how to protect themself from experiencing information anxiety. First, like Naveed and Anwar (2019) suggested, conducting information literacy instruction is associated with reducing users' information anxiety. The concept of information literacy is also mentioned by respondent 1 (appendix, 6), which can be practiced and improved by adding experience. Respondent 3 also explained that people should be more strategic as to what they are receiving. The authors encounter this statement as an

exhortation which users of social media should encounter. Users should take responsibility for their information consumption and not wait for the organization behind the social media platforms to take responsibility for the user. Suppose that a person is going to a restaurant. The person is allergic to tomatoes, then the responsibility lays on the person. The person has to make sure that the restaurant is aware that he cannot consume tomatoes. The person cannot hold the restaurang fully responsible if the person then gets tomatoes and gets an allergic reaction after eating. Nevertheless, the responsibility does not fully lie on the person either, it is a manifold responsibility. This example can be used as a guideline for the individual responsibility but also for the social media platforms. The users need the possibility to dischart information which they do not find valuable and the social media need to determine the users personal preferences. An argument which Sanja acced, she thinks it is great that users have the possibility to cut off the information which is causing them anxiety and she states that this is a function which she uses. In conclusion, if the platform misses the possibility for filtering and so on, can the users not help themselves. It needs to be a two way street. The two way perception seems however to be missing. Respondent 3 namly believes that companies are too concentrated to make revenue and henche unwilling to develop solutions which make people less addictive. An argument which the authors find to be valid and worth consideration.

MSM as an advanced Information communication technology (ICTs), here the author argues that ICTs proficiency is also closely related to information anxiety. As some of our respondents implies, different IAPPs are very important in the digital information environment and some of them are caused by lack of skills associated with information and communication technologies. However, as Naveed and Anwar (2019) mentioned, alo suggested by Alina (Appendix, 7), ICTs proficiency can be differentiated in individuals, and its level can be increased by embracing information and communication technology and develop practical ICT skills in order to stand up to information anxiety with skilled knowledge and experience.

Finally, individual awareness should be raised accordingly, besides taking an active stance for the information flow, could users of social media be aware that they are probably wasting their time when using social media. Sanja explains that she has been working with it for so long that she knows that she is just wasting her time when using it. Nevertheless, what the individual utilizes social media for is highly personal and it is therefore hard to see this argument as a solution, but the statement might make people reflect regarding why they use social media and what they get from it. The usage might be questioned if the user lacks a strong motivation for the usage, then it might be reasonable to stop using it.

6 Conclusion

The ambition of this study was set out to investigate the phenomena of information anxiety under the context of MSM. we therefore propose the following two research questions:

RQ1: What are the Identified anxiety-provoking phenomena (IAPP) of information anxiety on mobile social media?
RQ 2:What measures can be taken to deal with information anxiety on MSM?

To answer these two research questions, we have firstly developed a conceptual model (see Figure 2.2) consisting of IAPPs of information anxiety on MSM based on the literature review, which is started by seeing a pattern and a possible overlap between the phenomena. The pattern emerged when the FeelCalc model (Kalwar, Heikkinen & Porras, 2012) was examined, which provided the inspiration of proposing the conceptual model. The CM was evaluated and proved after testing the three hypotheses, which were tested individually after collecting the empirical data from the quantitative survey. As a result, the CM became the significant contribution of this study and then served as a guideline and also foundation for the later research, including the qualitative interview and meta-inference, and thus provide insights and answer the research question.

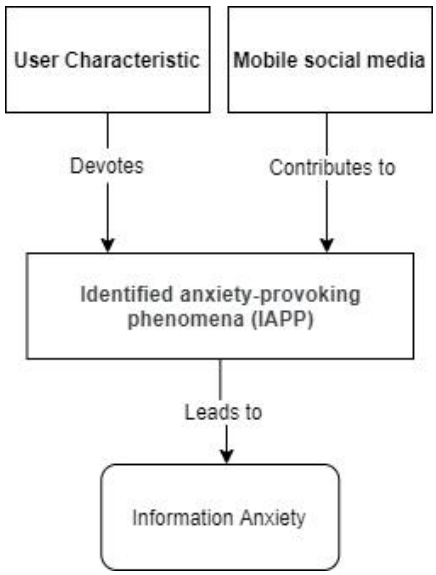

Figure 2.2: Conceptual Model

6.1 Key Findings

In this section, we present key findings emerging from this study about Identified anxiety-provoking phenomena (IAPP), as well as the measures of dealing IAPPs from the perspective of information system discipline.

6.1.1 IAPPs

The findings of IAPPs successfully answer the research question of '*What are the Identified anxiety-provoking phenomena (IAPP) of information anxiety on mobile social media*'. Eight IAPPs were found in total, there are Disinformation, Information overload, Information FOMO, Information seeking anxiety, Anxiety regarding information security, Anxiety provoked by technical attributes, Anxiety-inducing self-efficacy and Excessive information exposure. The previous five IAPPs were identified based on the literature review, which relies on the context of computer, internet or social media, instead of MSM. In this study, the five IAPPs were redefined under the context of MSM, and after collecting quantitative data from the survey respondents, three extra IAPPs were found including Anxiety provoked by technical attributes, Anxiety-inducing self-efficacy and Excessive information exposure. Afterwards, the semi-structured interviews were conducted, interviewees were asked with their perception about the questions formatted by eight IAPPs. By embracing with mate-inference that combines the results of both quantitative and qualitative findings, lead to the conclusion that all eight of the IAPPs lead to the users feeling information anxiety when using social media.

6.1.2 IS-oriented Solutions

As the information system community is well positioned to study the interaction between human and technology, could also be the scars that digital technology left. The vision of systems, technologies and its interaction with humans granted by socio technical approach enables IS researchers to theorise and advise stakeholders on risky impacts of IT, which mentioned before as social media user, MSM company and IS research. Thus, in order to answer the second research question of '*What measures can be taken to deal with information anxiety on MSM*', the IS-orientation solutions were provided after analyzing the interview transcripts, which contains three aspects: Technical level, Managemental level and Individual level. These aspects give a result that there might be a certain way to help stakeholders to deal with information anxiety. Thus, Government and social media companies need to investigate different solutions to create an environment that makes users' health feel better. The relationship between technology and humans is vital. Thus, there has to be some balance between the relationship to make it work in a long term manner.

6.2 Future Research

Future investigation needs to be considered due to the limitation in terms of research time and resources. As delimetation mentioned, the quantitative data was only collected from northern Europe and easten Asia, lacking the MSM users in other regions which inevitably caused bias. The number of collected samples still need to be increased with the even distribution regarding age, gender and educational level in the future. Regarding the eight IAPPs, it needs to be investigated individually by depth in the future, especially for three extra IAPPs that are found within this study: Anxiety regarding technical attributes, anxiety-inducing self-efficacy and excessive information exposure, and then strengthen the conceptual model in figure 2.

Also, the pandemic makes it hard for the authors to find an appropriate number of interviewees when it comes to obtaining the measure and solution to information anxiety on MSM. Future research can be implemented by interviewing more skilled and experienced people about their insights of solving the IAPPs. Lastly, as the technology is constantly developed, the research of defining IAPPs still needs to be updated accordingly when new knowledge occurs. If applicable, should update them into the conceptual model.

Appendix 1 - Survey Guides

Information Anxiety on Mobile Social Media

Information anxiety on mobile social media in this study means people yield anxiety when receiving information by using mobile social media. This survey aims to get the public perception regarding this phenomenon and obtain practical information related to mobile social media use and its solutions.

Information about the survey:
The answers you give us in this survey will not be traceable back to you, you are anonymous. The answers we will collect from this survey will be used within our study. We do however hope that you will answer the questions as truthfully as you can. You have the right to end the survey at any time. We won't contact you after this survey and therefore we would like to thank you for your time and contribution.

* Required

1. 1. Do you use mobile social media at least once a day? *

Mark only one oval.

- ◯ Yes
- ◯ No

2. 2. What is your age? *

Mark only one oval.

- Under 18
- 18-25
- 25-35
- 35-45
- Over 45

3. 3. What is your gender? *

Mark only one oval.

- Male
- Female
- Other
- Prefer not to say

4. 4. Where are you from? *

Mark only one oval.

- Europe
- Asia
- North America
- South America
- Africa
- Oceania
- Antarctica

5. 5. What is your highest completed educational background? *

Mark only one oval.

- ◯ Elementary school
- ◯ High school
- ◯ Vocational school
- ◯ Bachelor's degree
- ◯ Master's degree
- ◯ PhD-degree
- ◯ Other

6. 6. How many hours in a day do you spend on Social media? *

Mark only one oval.

- ◯ Less than 1 hour
- ◯ 1-3 hours
- ◯ 3-5 hours
- ◯ 5-8 hours
- ◯ More than 8 hours

7. 7. What do you use social media for? (at least select one) *

Check all that apply.

- ☐ Social interaction
- ☐ Information seeking
- ☐ Pass time
- ☐ Entertainment
- ☐ Relaxation
- ☐ Communicatory utility
- ☐ Convenience utility

8. 8. Have you reflected on your social media use and how that affects your mental health and yields to anxiety? *

Mark only one oval.

- ◯ Always
- ◯ Sometimes
- ◯ Rarely
- ◯ Never

9. 9. Choose the important factors that matter to information on mobile social media from your perspective *

Check all that apply.

- ☐ Fake news
- ☐ Too much information
- ☐ Hard to seek information
- ☐ Fear of missing out information
- ☐ Security issue

10. 10. Sometimes I feel anxious when being exposed to increasing quantities of fake news and false information when using mobile social media. *

Mark only one oval.

	1	2	3	4	5	
Completely disagree	◯	◯	◯	◯	◯	Completely agree

11. 11. Sometimes I feel overwhelmed when there is too much information circulated on mobile social media *

Mark only one oval.

	1	2	3	4	5	
Completely disagree	◯	◯	◯	◯	◯	Completely agree

12. 12. Sometimes I feel left out when I see posts on social media about events that I didn't attend *

Mark only one oval.

	1	2	3	4	5	
Completely disagree	◯	◯	◯	◯	◯	Completely agree

13. 13. Sometimes I keep away from social media to avoid seeing posts of an event I missed. *

Mark only one oval.

	1	2	3	4	5	
Completely disagree	◯	◯	◯	◯	◯	Completely agree

14. 14. Sometimes I feel anxious when I could not find the information I want when using mobile social media. *

Mark only one oval.

	1	2	3	4	5	
Completely disagree	◯	◯	◯	◯	◯	Completely agree

15. 15. Sometimes I am afraid that my personal information will be leaked. *

Mark only one oval.

	1	2	3	4	5	
Completely disagree	◯	◯	◯	◯	◯	Completely agree

16. 16. Sometimes I feel afraid that my mobile social media accounts will be hacked. *

Mark only one oval.

	1	2	3	4	5	
Completely disagree	◯	◯	◯	◯	◯	Completely agree

17. 17. Sometimes I feel more anxious when using certain mobile social media platforms due to their functions, layouts and other attributes. *

Mark only one oval.

	1	2	3	4	5	
Completely disagree	◯	◯	◯	◯	◯	Completely agree

18. 18. Besides the circumstances above, do you have examples of other experiences of feeling anxious when using mobile social media? *

Check all that apply.

- ☐ Anxiety regarding information storage
- ☐ Comparing youself with others
- ☐ I worry about how many people will like/respond to the things I post
- ☐ It is important to impress others on mobile social media
- ☐ I feel anxious for spending to much time on mobile social media

Other: ☐ _____

19. 19. I am aware that people may have different levels of abilities to be anxious when receiving information on mobile social media. *

Mark only one oval.

	1	2	3	4	5	
Completely disagree	◯	◯	◯	◯	◯	Completely agree

20. 20. Generally speaking, I think the topic of information anxiety on mobile social media is significant and urgent, and needs investigation. *

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ I don't know
- ◯ Other: _____

21. 21. Do you think there are any solutions for mobile social media to deal with information anxiety?

_____

_____

_____

_____

_____

22. 22. Is there anything else you want to mention which we haven't asked?

_____

_____

_____

_____

_____

Appendix 2 - Survey result with text-answer

Survey answer of question 21: Do you think there are any solutions for mobile social media to deal with information anxiety?

I dont know
to have a better filter
strong policy
No, stop using it.
Addressing fake news can help reduce the challenge.
Filter unnecessary and unimportant information
As private service providers can design user rules as they want, there is a lot of possibilities to deal with this issue. On another hand, if the platform impacts too much on the contents, the dynamics of the platform change and some users might feel that their freedom of speech is under a threath. Of course radical content should be deleted, but the anxiety increases if all parties are not treated equally. If some radical ideologies are approved and some are not, this affects highly to the reliability of the platform. Therefore the service provider should be really strick with all kind of hate speech and fake news, and track and moderate it with the help of machine learning. This could also be applied even in the phase of posting the content; if the post includes terms or content (pictures or videos) that are hateful or hurtful, it can not be posted to protect other users.
some approach about gamification, make the interaction between user and social media more interesting and decrease anxiety
limiting the time using social media by movie set up or with assistance of technologies like apps
Information filters and tailoring your own feed, notifications etc.
Have own restrictions on the time limit you’re exposing yourself to social media. Use the function on the iPhone that does so. Instagram also has a function that restricts you
Vérifié les informations et couper le temps d'exposition
Less user behavior monitoring.
Carry out some laws about the fake news
More education about it in Schools for younger students that grow up under these times. To be able to manage this topic better.

Turn off notifications
Cut off « infinite scroll » and push notifications
Reduce utility frequency
1. The like functions is sending out signals that we post for approval. 2. The culture of posting cool content where you never ever are alone. You only go to the mall with your bestie, never alone. 3. The toxic judgements about peoples opinions. People on the internet are either extremely left or right. It is very uncomfortable having somewhat intermediate and differing opinions. 4. The facefilters. I have many friends, normally not especially superficial, complaining about their noses and using the nose thinning face filters. Can't understand how Instagram allow them.
I don’t think so, there are too many informations nowadays and a little thing can become a huge scandal or what ever, it’s just like being in a snow storm and trying to not being touched by a snowflake, that’s impossible, as seems solutions to information anxiety from social media, or maybe just stop social media
I don't know
Keep away from the phone
fobiden the media company get our private information and habits
Yes, I think it would be good if the platform limited the amount of information one can receive in a day.
Make yourself busy, then you don’t have sufficient to use mobile phone, as well as the social media.
I don’t think anxiety can be solved through mobile social media
More krypted informationa and we need internet policedepartment because today the hate and crimes on internet is biggee than ever.
Ja delvis.
Keep away fake info
By making social media less addictive
I don’t know!
Yes
People should start using their instincts and commin sense rather than getting influenced by media's perspective
Nope :(
It depends. People may feel anxious due to different reasons. A possible way is filtering

information based on user analysis.
Besides regulations, users can also practice and improve their ability of information literacy, aim to being less anxious in this bad environment
Talk with your loved ones.
FILTERING THE RIGHT INFO
They shouldn't collect user infor with or without their concent. Too muhc infor is publicly available.
Take everything you see on social networks with a pinch of salt and never compare yourself with it.
To minimize the social media anxiety, I think we should divide our time and use different social media and diversify rather than spending most of time in one particular social medium.
Dont use unnecessary social media, use based on your need and interest.
yes
I think maybe the interaction ways can mitigate the information anxiety. Most of the time, the endless feeds would lead to the afraid of missing important information, but actually no.
To control your access and limit it, and to control what u follow and delete those you Don't really need and keep yourself aware about social media effects every now and then.
it should be easier to filter information
spend less time on it
Not yet. Maybe when other effective information tools were created.
Don't use it. Be yourself.
use less
i dont know
No
Take a brake, temporarily close down the accounts if they make you unhappy. Be with your real friends in the real world.
The center of social life should be moved offline again, but the question remains how.
Limit your usage of social media
Limit the time on the different platfoorms plus realizing that only hard earned success if shown regarding financial attributes

Survey answer of question 22: Is there anything else you want to mention which we haven`t asked?

People live their life on social media and I think a lot of them would be happier if they lived their lives in the real world instead. But it’s hard when everyone else is there, you don’t want to be left out, Even though I think it would be the best for everybody if they reduced their time there.
The concept of Deepfakes (synthetic videos) on social media makes me anxious more than anything.
As the platforms can be used for influencing politics and elections, as a one aspect of hybrid warfare, to bullying and for destroying other peoples lives by posting fake information, the responsibility of the platform captains is high, and I see that as long as platform owners are not hold to be responsible of how the platform is used, social media is becoming even more and more dangerous phenomena for societies world wide. Perhaps massive sanctions would force platform owners to act?
The reasons for information anxiety are from many aspects, like social issues, information technology development, and so on. When technology brings convenience for users and with the increasing spending time on digital devices, the negative sides are not avoided
No
Nope
No
Keep up the good work!
No :)
Good luck on your thesis :)
NO

Appendix 3 - Invitation letter

LUND UNIVERSITY
School of Economics and Management

To whom it may concern.

We are a group of students who study the master´s program information systems of the school of Economics and Management at Lund University. Prior to our final degree project, we have decided to investigate the phenomenon of information anxiety on mobile social media. At present, the increasing raise of social media has brought challenges such as fake news, information overload to mobile social media users, and exerts negative effects on their mental health.
Our main purpose for this research is to identify the patterns of information anxiety on mobile social media, and also the solutions that social media developers can take to reduce the phenomena. We would like you to give your professional opinions of how mobile social media deals with user`s anxiety from the perspective of your working position within the social media company, also the viewpoints regarding the information anxiety patterns as a mobile social media user.
Above all, our interview will be focused on the following scope:

- Investigate the phenomenon on mobile social media which is causing information anxiety.
- Identifying possible solutions for decreasing information anxiety.

We would appreciate getting in touch with someone within your corporation who is working with the field that relates to mobile social media. We are open to holding a conversation through Zoom.

Many thanks and kind regards,

Agnes Cadier **Jiayi Ding** **Sumaia EI Khazzar**

Agnes Cadier *Jiayi Ding* *Sumaia EI Khazzar*

Appendix 4 - Interview Guide 1

Main, Interview guide:

Introduction questions:

Before we start, we want to make sure that you know your Ethical rights regarding this interview.

- We will only record the interview with the participate permission
- You have the right to be anonymous
- You can cancel the interview
- If there is a question you would not like to answer, you have the right to skip
  - Lastly, all material will be deleted after it has been analysed.

1. Do you mind if we record this interview?
2. Do you wish the interview to be anonymous?

Theme: **BG** (Background)

Age (B-A):

- How old are you?

Experience (B-E):

- What is your background and educational level?
- For how long have you been working within the company?
- What is your position and responsibilities within the company?

Theme: **IAPP** (Identified anxiety-provoking phenomena)

Disinformation (DI):

- Have you ever heard of disinformation, regarding the fake news and false information nowadays?
- Do you think mobile social media has accelerated this kind of problem?
- According to our survey respondents, they proposed “to have better filters” to decrease the disinformation, what is your definition of “filter” in your position?

Information overload (IO):

- According to our survey respondents, a large number of them think there is so much information nowadays circulating on mobile social media, including endless notifications, what do you think of this problem and do you have any solutions within your company?

Information FOMO (IF):

- Some social media users may feel left out when they see posts on social media about events that they didn't attend or information they missed, how would you work with this phenomena?

Information seeking anxiety (IS):

- Do you think your social media platform is easy for users to seek information?
- Is there any way to improve this function? Some people proposed good interface design may benefit, what do you think?

Anxiety regarding information security (AS):

- Does your company work with ensuring the users that their information is secure on your platform? Is there any function or solution you could implement to decrease the anxiety?

Anxiety-inducing self-efficacy:

- Do you think your social media platform ever considered that people may have different levels of abilities to be anxious when receiving information?
    - If yes, what's the solution?
    - If not, would you like to consider it in the future?

Excessive information exposure:

- There are many users worried about the excessive amount of time they spend on social media and they suggested that it would be good if social media platforms had a function which would limit the time they spend on the platform, what do you think?

Anxiety provoked by technical attributes:

- Sometimes respondents said they feel more anxious when using certain mobile social media platforms due to their functions, layouts and other attributes. Do you have any thoughts according to your mobile social media platform?

Appendix 5 - Interview Guide 2

Introduction questions:

- Before we start, we want to make sure that you know your Ethical rights regarding this interview.
- We will only record the interview with the participate permission
- You have the right to be anonymous
- You can cancel the interview
- If there is a question you would not like to answer, you have the right to skip
- Lastly, all material will be deleted after it has been analysed.

1. Do you mind if we record this interview?
2. Do you wish the interview to be anonymous?

Theme: **BG** (Background)

Age (B-A):

- How old are you?

Experience (B-E):

- What is your background and educational level?
- For how long have you been working within the company?
- What is your position and responsibilities within the company?

Theme: **IAPP** (Identified anxiety-provoking phenomena)

Disinformation (DI):

- Have you ever heard of disinformation, regarding the fake news and false information nowadays?
- Do you think mobile social media has accelerated this kind of problem?
- According to our survey respondents, they proposed "to have better filters" to decrease the disinformation, what is your definition of "filter" in your position?
    - How do you deal with fake news?

Information overload (IO):

- According to our survey respondents, a large number of them think there is so much information nowadays circulating on mobile social media, including endless notifications, what do you think of this problem and do you have any solutions within your company?
    - In your company, do you think or see information overload as a problem?
    - I guess you do share some sort of information with the users,
        - Could you evaluate your thoughts? How do you handle this problem? Is there any sulotion?
        - What is your purpose? Do you just share the information in order to reach out?
- Do you think it is complicated to get your information across when there is so much other information on the different platforms?

Information FOMO (IF):

- Some social media users may feel left out when they see posts on social media about events that they didn't attend or information they missed, how would you work with this phenomena?

Information seeking anxiety (IS):

- Some people may feel anxious when they could not find the information they want on mobile social media, what do you think? Is there any way to improve this?

Anxiety regarding information security (AS):

- Is there any policy that has been implemented to avoid anxiety regarding information security? Is there also any function or solution you could implement to decrease the anxiety?

Anxiety-inducing self-efficacy:

- Do you think your social media platform ever considered that people may have different levels of abilities to be anxious when receiving information?
    - If yes, what's the solution?
    - If not, would you like to consider it in the future?

Excessive information exposure:

- There are many users worried about the excessive amount of time they spend on social media, what do you think? Any solution?

Anxiety provoked by technical attributes:

- Sometimes respondents said they feel more anxious when using certain mobile social media platforms due to their functions, layouts and other attributes. Do you have any thoughts?

Appendix 6 - Respondent 1

Row	Speaker	Transcript	Code
1	**Interview Transcript (E1)**		
2	JD	Can you give us a simple introduction of yourself?	
3	R1	Yes, I am 24 years old, just graduated from my bachelor degree, and I have been working about one and half years, and I am going to have my master degree of human computer interaction next year. For my job, I am a product manager of AI in DiDi, a Chinese vehicle for hire company, so in other words, it is also a social media platform for strangers to socialize. For my position, I am responsible for the planning and design of artificial intelligence products, the progress management and tracking within the product life cycle, and the communication and cooperation with various departments to improve product experience.	BA, BE, BN
4	JD	I remember you mentioned that you also worked for one social media company called Wangyi, right?	
5	R1	Yes, I have been working in Wangyi one year ago, and the position was also the product manager, but now I am working in DiDi for more than 1 year.	BE
6	JD	You said your work is related to Artificial intelligence, can you give us some details about what you do with the position?	
7	R1	It usually contains three parts, project construction, project support and combining the current team's big data, algorithm, engineering and other capabilities to provide feasible product solutions and implement them. Now, I am working on a project about designing robots with voice recognition, which is benefited from AI technology, just like Siri.	BP, BE
8	JD	So, have you ever heard of disinformation, which means fake news and false information nowadays? Like the pandemic, there is much disinformation circulating nowadays.	
9	R1	Yeah, when I was a student, I was stuck by lots of fake information, yeah I mean, the disinformation was mainly targeted in teengaer, like I always received false information about the shoes, because I was interested in buying the shoes online. But at that time, mobile phones were the main approach that spread the fake news. There are some technical solutions for this approach that are mainly judged by number identification, and also I usually label the phone number that spreads the fake news.	DI, TS

10	JD	Do you think mobile social media has accelerated this kind of problems?	
11	R1	Yes, I think to some extent yes, you know, using mobile social media is a big trend these days, and fake news can be easily shared by just clicking a button, so i think there are both advantages and disadvantages.	DI
12	JD	According to our survey respondents, they proposed “to have better filters” to decrease the disinformation, what is your definition of “filter” in your position?	
13	R1	Like I said about the disinformation of smart phones, I think it can also apply in the mobile social media context. So the filter can be some approach that the platform can label the account with the word like “disinformation”, then decrease its transmission, or just block the account, I think this is a filter that tackles this problem at its source. And also, recently I am working on a project that uses AI technology to achieve voice interaction with our customer, voice interaction cannot be separated from natural language understanding, every word spoken by the user should be correctly understood and given feedback. I mean, maybe this can be seen as a filter that ensures the message is corrected and spread, if the mobile social media has the function to provide voice service. Besides the technical stuff, for my personal working experience, I can say that the government can act also as a filter, like there are plenty of fake news regarding the political issue, mobile social media become a game tool for political groups. I know like Indian government, it monitors social media 24 hours a day to crack down on fake news online. And our chinese government will add pressure to Chinese mobile social media companies, to encourage improved platform`s ability to detect error messages, and also implement some policies that restrict the spread of the false information, yeah, I mean, it all can be seen as a filter from my point of view.	DI, TS, MS
14	JD	Yeah, there are really good examples. According to our survey respondents, a large number of them think there is so much information nowadays circulating on mobile social media, including endless notifications, what do you think of this problem and do you have any solutions?	
15	R1	Yes, like I said before, I once faced lots of advertisements that kept on sending me the information and notifications, that made me feel so annoyed. But what I would do is just block them, yeah, I mean, this is the fastest way for me to cut the resource.	IO
16	JD	Okay, next question, some people may feel left out when they miss the information or events that they didn’t attend, have you ever worked with this phenomena?	
17	R1	I think it's a quite normal emotion, but I think maybe it's depends on what kind of information or event it is, like me, will feel left out when all my friends attend one event, but for some event that related to my job or company, I won't feel anxious or left out. So it also depends on different people I guess. And I think this problem is hard to solve, maybe social media can label the information and event with some keyword, or do some personalization to different users.	IF, TS

18	JD	Okay, you said your previous company is called Wangyi, and it has a platform for users to seek information, so do you think that platform is easy for users to find information?	
19	R1	Yes, of course, I think good interface design is extremely important, that can help users easily find the information or the function they want. Also, on our interface, we have the contacts of our employee that are responsible for answering any questions from our user if you call that phone number.	IS, TS
20	JD	Okay, you mentioned that good interface design is beneficial, can you give us an example?	
21	R1	yeah, like Jobs said, if the interaction is simple, it will be comfortable. Like, we have a search function for users to type the keyword to find the function they want, also like, if it's the first time for them to use our platform, we will provide a tutorial that shows how to use our platform in following steps.	TS
22	JD	Yeah, that's a good function. Okay, let's move on, have you thought about information security issues on mobile social media?	
23	R1	Yeah, I think nowadays, there is an increasing number of data stored in social media, and I am sure that the amount of it will become larger. But nowadays for some big companies, the data is saved and stored in the cloud, the technology of cloud computing actually improves the capacity of information storage. And with the implementation of cloud computing, security issues become more prominent. In a cloud computing architecture, security involves many layers, like people may worry their information may be leaked, its personal level, but it has more aspects, like network security, software and system security.	AS, TS
24	JD	So you mean the latest technology can be a solution to constantly improve security, like stronger databases?	
25	R1	Exactly, and also the distributed system.	TS
26	JD	Yeah, next questions, do you think your social media platform ever considered that people may have different levels of abilities to be anxious when receiving information?	
27	R1	Yes, I think it is obvious, and my company has also considered this problem. For example, DiDi has a platform for people to get taxis, and we have different platform pages for different targeted groups. Like young people can get a multifunctional interface that provides various functions, like choosing the nearest route or cheapest plan. But for old people, we provide just a button called “get a taxi”. So yeah, I mean mobile social media can implement the same solution in the future, like providing different services according to different user groups, and in that way decrease the anxiety.	AI-SF, TS
28	JD	There are many users worried about the excessive amount of time they spend on social media and they suggested that it would be good if social media platforms had a function which would limit the time they spend on the platform, what do you think?	

29	R1	Yeah, like for me, sometimes I also worried about that I have spent too much time on social media, and actually I don't think the application of DiDi has this kind of the function to limit the using time, cause it is a vehicle for hire company, user only open it when they need to rent a car. But when I play some games in my childhood, there is a function that records how much time you have spent online, and will give you notifications about the left time and restrict your behavior. Anyway, I think this way can not really solve the problem that you mentioned, it really depends on personal level, everyone should be aware of the advantage and disadvantage of social media. I think nowadays, like your topic, technical settings can not really solve the problem of getting anxious when using social media. I mean, if possible, the educational sector can also raise the awareness of limiting the time spent on social media, from primary school, to help people correctly understand the use of social media from their young age.	EIE, TS
30	JD	Yeah, that's a good point, because according to our survey respondents, many of them suggested that keeping away from social media will benefit. Next, sometimes respondents said they feel more anxious when using certain mobile social media platforms due to their functions, layouts and other attributes. Do you have any thoughts according to your mobile social media platform?	
31	R1	Yeah, I agree with this point. As different mobile social media platforms have their own setting styles and functions. Like for me, I prefer the simple style of interface designing, and with the functionality that can be easily used and identified.	AP-TA, TS
32	JD	Yes, we got it. Then is the last question, has your company ever considered this phenomena, that users are getting more anxious when using social media, so I mean do you make some moves to discuss it?	
33	R1	I think we have considered it before, but actually I don't think we have specially made a discussion to solve it, one is maybe because DiDi is not a social media platform for users to receive or spread information, as it is only a platform for people to order car services, like Uber. and also, like I mentioned before, it's more like a individual issues, like when we were childs, we receive information by watching TV, and the advertisement there also can make create a anxious atmosphere, as technology developed, young people are addicted to computer games, and now, we are crazy about the mobile social media. So I mean, it is an inevitable phenomenon. But anyway, as a developer, I do think that providing some functions that help to decrease the phenomena is necessary, but the thing is that it will not be our own focus when we design the mobile social media as a business.	AP-TA, TS
34	JD	So you as a developer, you think it's not necessary to consider this aspect, because anxiety is more like a natural behavior?	
35	R1	Yeah, because I only work with B2B service, which means I am mainly working with the business side, but not the clients, maybe I don't really have that experience, but I guess my colleagues who provide service to customers and clients may have the knowledge that you have mentioned.	MS

36	JD	All right, I guess it's all of our questions, thanks again for your participation!	
37	R1	You are welcome!	
38	AC	yes, and I just want to know if you wish it to be anonymous ?	
39	R1	Yes, if possible.	

Appendix 7 - Respondent 2

Row	Speaker	Transcript	Code
1	**Interview Transcript (E2)**		
2	JD	Can you give us a simple introduction of yourself?	
3	AP	Okay, you can just call me Alina, and I am the first year master student in Aalto university in Finland, and my major is Machine learning, Data science and Artificial intelligence. And for my bachelor program, I studied software engineering, yes.	BE
4	JD	So, could you give us some information about the mobile social media company you worked with before?	
5	AP	Ok, I worked in Weibo, a Chinese social media company during 2019, I was in the group that related to user information collection.	BE
6	JD	Could you give us some details about what Weibo is, it is like Chinese version of Twitter? And also maybe your position, like what you usually do at work?	
7	AP	Yes, they are similar social media. And my position is to work with user experience alrigothom by using Machine learning skills. We have to find out what kind of information or what kind of context that user likes, and then design the service to the targeted group, yeah, and something like this, and also like the recommendation system.	BP
8	JD	Okay, so like how long have you been working in that company?	
9	AP	I was taking my internship there, less than 6 months.	BE
10	JD	So, that's the introduction part. Next, have you ever heard of disinformation, which means the fake news and false information these days, have you experienced that?	
11	AP	Yes, recently, I am so confused about the covid information in Indian, actually, I don't know if you see the news about that, I am not sure that it is real or fake. I think nowadays I receive information mainly from Weibo, there is lots of uncertain information. Even though I have worked on the latest project, I think it is still hard to detect for ordinary people to find out it is real or fake.	DI
12	JD	Do you think mobile social media has accelerated this phenomenon?	

13	AP	Yes, definitely. Because we just receive information from mobile social media everyday, and almost everyone has a smartphone, it is really easy to get information, but sadly just don't know how to detect them.	
14	JD	Before this interview, we conducted a survey to the public about their perception of this topic, and according to our survey respondents, they proposed “to have better filters” to decrease the disinformation, what is your definition of “filter” in your position?	
15	AP	From the machine learning point of view, there are some algorithms and models. Like in the beginning, we just collected some data, including information and news, or we generated some news for example, like the fake news in Indian, and real news in Finland, then we have different title to label the news with “fake” or “real”, and then we combine them together as the training dataset, then we can design and make the machine learning models, and then use the original data to train this model, to increase its accuracy of prediction. Then the model has the ability to predict the news. Before the news is released, we can use the algorithm to test the truth or falsehood. And I think it could be implemented to the application to help us to identify disinformation, and decrease the impact of fake news by adding the filter by using the machine learning model.	DI, TS
16	JD	According to our survey respondents, a large number of them think there is so much information nowadays circulating on mobile social media, including endless notifications that can easily distract your attention.	
17	AP	Yeah, I had that experience.	
18	JD	Do you have any solution?	
19	AP	I think the most popular solution in the current situation is, like, the better recommendation system? It is about pushing the information to the targeted user. For example, if you search for cats or dogs on Weibo, then you will get lots of information related to pets, so this is about the recommendation system, yeah, if you show the things you like to the platform, then you will receive this kind of information more frequently than other information. Yeah, so i mean this can be a solution to decrease the information, only send the information that may interest you.	DO, TS
20	JD	Yeah, that's reasonable. Some social media users may feel left out when they see posts on social media about events that they didn’t attend or information they missed, how would you work with this phenomena?	
21	AP	Not really. But I understand this problem, and i think this can be solved by better UI design and function. For example, when we use Facebook, you friends can tag you when posting some activities. But actually, I don't really have experience with this question.	IF, TS
22	JD	Okay, let's move on. Do you think Weibo, that your social media platform is easy for users to seek information?	
23	AP	If you want to find some information about the hot topic, it is easy to find,	IS,

		cause Weibo has the list that contains the heated news or topic. But like for me, it is very difficult to find some video or image that contains the information I want to know. Like when I watched a video but forgot to store it, and next time it will be so hard for me to find it again, and this is the thing I want to tackle or solve in the future by using more advanced machine learning knowledge, like the detection for the image, and also the audio recognition, and other artificial intelligence area, like natural language processing.	TS
24	JD	Yeah, I know that google has some functions that search for images	
25	AP	Exactly, but for mobile social media, it is not so common, and it could be a process that could be implemented in the future.	TS
26	JD	Some people proposed good interface design may benefit, what do you think?	
27	AP	Yeah, for example, I don't like using Facebook, cause the layout is so complicated, I don't know how to search the information or function I want, it is time consuming. So maybe the clear symbol and simple interface will be better.	IS, TS
28	JD	Yes, like when I use Weibo, I find some service like, provide the user with contacts, like phone numbers of the staff if you have any confusion.	TS
29	AP	Yeah, you can also leave a comment about what you are anxious about. Also, I think like Tiktok, one of the reasons that it is getting popular is the simple design of the interface, and it is easy for users to navigate different pages.	TS
30	JD	Okay, next is the security issue. Have you ever worked with information security before? Including the privacy, and the risk that your social media account may be hacked.	
31	AP	I studied security courses in my bachelor, but actually do not really do the related work during my internship. But I know information security is extremely important in the current stage. Like I said, if we want to have a better recommendation system, security needs to be emphasized.	AS, TS
32	JD	Have you worked with databases or cloud services before to ensure the secure environment of mobile social media?	
33	AP	Not really, but actually for the database, the password of the user will be encoded, so it's not a main focus right now I guess in the information security area. The most important thing for me is that mobile social media keeps listening to us, like monitoring what we do all the time, which is a creep thing.	AS, TS
34	JD	So what do you think about privacy, like the private information can not be guaranteed and leaked to the public.	
35	AP	Yeah, sometimes I feel unsafe if my home address was exposed to the public. But I think it's more like how countries manage their regulation on	

		mobile social media.	
36	JD	So you know anything about the managemental solution?	
37	AP	Like some of them have the function to show their address when posting something, the user will have the right to decide whether they want to show their address in Weibo, like if you hang in a park, it is common you tag your location to the mobile social media.	MS
38	AC	So it's more like a function and service that Weibo provides to protect user's privacy?	
39	AP	Yeah.	
40	JD	Do you think your social media platform ever considered that people may have different levels of abilities to be anxious when receiving information? Like young people may worry about some information, but the older generation may think it is not a big deal.	
41	AP	Yeah, that's awful. I think this can be solved by a targeted recommendation system. For example, we push certain topics of information or advertisement to targeted users, like with different ages.	AI-SF, TS
42	JD	You mean like personalization?	
43	AP	Yes, exactly. Provide different services to individuals according to their personal preferences.	TS
44	JD	Next is our extra finding from our survey. There are many users worried about the excessive amount of time they spend on social media and they suggested that it would be good if social media platforms had a function which would limit the time they spend on the platform, what do you think?	
45	AP	Yeah, if you are under 14, Weibo will limit your behariovr, like the time spent on social media, the number of comments you can give. Maybe for some applications, we can design some pattern, that after 2 hours playing mobile social media, we can send a notification, or change the style, color and layout of the content, give a hint to the user that you already spent 2 hours in the media, and suggest you have a rest.	EIE, TS
46	JD	Have you heard the concept of gamification? And have you ever worked with that before?	
47	AP	Yes, I know gamification is to design something more funny, and the user may feel like playing a game, which increases the interaction between user and mobile media. Actually, I have not worked with gamification before, but I remember one food delivery application in Finland. After you order something, it will tell you the delivery time is 30 minutes, then it gives you a funny page that you can tap on it, just like a small game, which I think it's really interesting. I like this kind of application, because it really decreases my tiredness and makes it more funny.	TS

48	JD	Are there any gamified elements on Weibo? Cause I think if the mobile social media keeps its user more interested and happy, then they may feel less anxious.	
49	AP	Actually, I think it depends on the type of mobile social media. Like Weibo, people use it mainly for searching news and chatting, it will be more direct for people to play some games instead of finding interesting stuff on Weibo. But anyway, I think it would be a great idea to make the gamified element on the function and service as a decoration, but not the main focus.	TS
50	JD	Sometimes respondents said they feel more anxious when using certain mobile social media platforms due to their functions, layouts and other attributes. Like you said you don't like the layout of Facebook, do you have any thoughts of Weibo?	
51	AP	Yeah, there are too many advertisements on Weibo right now, and I think it also applies for other Chinese mobile social media. And the advertisement there is big, and the button to close it is extremely small, that is easily click the advertisement and go into another application or page by accident. So I really hope that Weibo could find some solution to overcome this in the future.	AP-TA, TS
52	JD	Okay, next is, when you work within the company, how the company organizes the staff, like what the mechanism inside, and means what kind of management solution that your company does with the information anxiety?	
53	AP	Maybe… What do you mean about that?	
54	JD	Like, are there any policies within the company that you need to pay attention to user`s anxious symptoms, or you just let them go?	
55	AP	Yes, we will hold a conference or meeting to discuss the feedback or comments from our users. I think it includes the information related to anxiety. And we will keep on discussing how we can improve the user experience through different approaches.	MS
56	JD	Okay, that's all of our questions. Do you have anything to add? And what do you think of this topic?	
57	AP	Yeah, I like this topic. Each question here is interesting, and represents different kinds of the phenomena regarding information anxiety on mobile social media. And I think it's the first time that you combine them together, which I think is really great.	
58	JD	Thanks, so Agnes and Sumaia, do you have any other questions?	
59	AC	I do have one question, I thought it was interesting when you talk about the cat, and then you got some advertisement regarding that, I just wonder, why is the company doing that? Regarding the non ethical advertisement.	
60	AP	That I discussed with my friends, I think it might be the profit, like it really targeted, it will increase the possibility of buying some kind of stuff from	

		some targeted user.	
61	AC	Yeah, I think that was my question actually.	
62	JD	Yeah, I guess it is all of our questions, and I think you really give us useful information.	
63	AC	I have another question, I don`t know if you already asked, is it okay we name you by name, or you wish it to be anonymous.	
64	AP	You can just use my name, it's okay.	
65	JD	Thank you so much !	

Appendix 8 - Respondent 3

Row	Speaker	Transcript	Code
Interview Transcript (E3)			
1	SK	Okay, can you simply introduce yourself to us?	
2	R3	Yeah, ehm, my name is ---- I'm 21, and I work with like communication and PR am I have a degree in communication studies and other degrees.	BA
3	SK	okay, So what about your work, what are you working with, what company? Can you tell us a little bit about your position and your responsibilities and so on..?	
4	R3	Yes, so right now, ehm, I work as an adviser for a politician in Canada. I work on their communications, so I kind of provide strategies on how on how to post on social media but also how to address political things online and how to host events. You cant really post events in person in Canada right now, so how to like take good advantage of digital and social media.	BP
5	SK	Okey is there any specific type of social media pla2orm you work with, or is it general?	
6	R3	Ah, yeah. Twi.er and Instagram are the main ones. Yeah.	BE
7	SK	ah, interesting! So, have you ever heard about misinformation regarding fake news and false information nowadays?	
8	R3	Yeah, definitely. I learned a lot about it during my bachelor's degrees studies. Ehm. Especially when it comes to journalism. I mean ehm, of course, there is disinformation in any kind of field and not just journalism. I think for science and even the entertainment industry. I also work within the film industry. There are always gossip things, but I guess gossip is different from disinformation. So, right now, with the Politician I'm working with, we have to like combat a lot of misinformation about the vaccines and lockdowns and that kind of stuff	DI
9	SK	Okay, but when it comes to mobile social media, do you think it is a problem, regarding the disinformation and fake news that is circulating?	
10	R3	Yeah, I think it is definitely the platforms that kind of allow it to happen. But most of the responsibility falls on the individuals and organisations. Ehm, the biggest example that I can think of for disinformation, based on people I know, is like WhatsApp, for example, ehm, like the older generation, generation X and the generation of baby boomers. There are a lot of people you know, with family members therefore messages and a lot	DI

		of that contributes and people not taking the time to research something so like, if your cousin tells you something, then you should probably not just take the word for it just because it is your family. People need to take the time to read news articles, but also, people don't have the time they are busy with work and school.. so	
11	SK	Yeah, but do you think they are aware that it is fake news or false information.	
12	R3	I don't think people are aware most of the time. Unless it is like ehm something that they are familiar with or some of their friend's comments, I think people, if they see someone sharing something stupid on Facebook, it is like, in my opinion, 20 % chance that someone will comment and tell them that it is stupid and not true. Most of the time, it is like, I don't want to be or cause any kind of combat, I don't want to fight with this person.	DI
13	SK	Yeah, mm so moving on to our survey respondent, many of them said something about having a be.er "Filter" regarding misinformation and false information. But what is your definition of what a "filter" could be?	
14	R3	A filter would be something like, that speaks for me would be about your political stands, and my main filter is not following anyone who is ehm, in a spectrum of like left-wing and right-wing and central. I do not engage or follow for anyone that is like beyond the central line thas my "filter". I do not say that people who are left-wing in Canada or just anyone around the world, that is not to say that whatever they share is true. It is just that, especially in North America, Canada and the US with Trump and politicians in Canada who is similar to Trump, you know, a lot of it just people trying to get people angry by saying all these facts that are actually not the fact they are fakes. So yeah. my filter would be following the centre	DI
15	SK	Yeah okay, I see. So have you ever heard about information overload? Some of the respondents said, or they think that there is so much information nowadays circulating on mobile social media and including endless notifications. What do you think about that? Do you see it as a problem? Is there any solution? Do you work with it when sharing information on social media?	
16	R3	I Definitely think it is a problem. I personally, I'm 21 right now. So when I was 16, like halfway through high school, I actually turned off all my notifications except for Imessage and email, just because I found myself checking Instagram and Twitter too often and being worried about how many likes and stuff so I just turned it off until I was 20 where I actually had notifications on again. Ehm what was the beginning of the question? Do I think it is a problem? Ehm I think it is a problem, especially right now in Canada with; the politician I'm working with everything she posts is kind of taking in very seriously. You know, if you think something is very simple hardened people always try to find reasons to be angry. And the big issue now in Canada is the vaccine plan is not going very well right now. I live in Toronto, and I think the biggest issue is that there is constantly just discussions like the scien&fic board they have not really given the &me to like focus on the work and realise information strategically. They have kind of being doing it hastily, and with the Astra vaccine, they went back and forth and changed the mind so many &mes and especially with the	IO

		pandemic, people and government agencies and politicians should just take time to stop constantly be posting every day. People don't need updates every single day. So.. yeah	
17	SK	But, do you work with that? I mean, do you share this kind of information?	
18	R3	Yeah, so ehm making sure that people in the politician heard constituents. Making sure that they are aware of when they can get vaccinated and so they started off with like people over the age of 70, and it slowly when to people over the age 30 or whatever. But in Canada, I'm not sure about Sweden right now, but in Canada, the Astra Zeneca vaccine was first being given to everyone. Then they changed it and said it can not be given to older people, and two weeks after that, they said it is good for older people but not good for younger people. And two weeks later, they were like, it is okay for people over 30 but no one under the age of 30. It is just like what? It is really irritating. Every time they make that change, we have to make sure we post about it. I mean, I think it is stupid because if I got the shot, like let's say I was an 18-year-old one week before they said it is not good for young people it is like, what now right? So, I think that everyone should be more strategic, but you don't really have a choice. People need to be updated.	IO
19	SK	So, you just share the information in order to reach out to the users or?	
20	R3	Yeah, just to satisfy or to make it look like we are, you know, updating?	IO
21	SK	So, you don't really care if the information overload?	
22	R3	I do care, but we don't really have a choice. Because if you don't share, they will criticise for being a bad representative because people might not have information but another thing we do, there is a lot of older people this consistency, so we do like monthly phone calls for people who are signed up on the list of not being on social media, so we call them and give them information directly and check in regularly. I think that it is bad that we post so often, but we don't have a choice so yeah.	IO
23	SK	Okey, but do you think it is hard to get your information across when there is so much information on different platforms. Is it like hard to reach out with the information you have to provide to the users, or do you think about this perspective?	
24	R3	I think it is difficult because there is a lot of algorithm changes, and for Instagram, for example, people have complained a lot about not seeing posts of people who they interested in or who they follow. While on Twitter, you have the option to view in chronological order. So I think that algorithms play a huge part I mean the same thing with the new station. If you follow a certain new station, you can follow them on social media, but you won't see everything they post. It is really hard to keep up, so yeah.	IO
25	SK	Okay, moving on to, some social media users may feel left out when they see posts on social media about like events and something they might miss	

		out on and they did not attend it. They could feel like that they are missing out on important information. How would you work with this type of phenomena? Would you feel left out?	
26	R3	I do feel left out usually only when it regards to like the creative industry. If I miss some music events or like a film or like a workshop on how to do some kind of arts, I do feel left out in that sense. But I personally think that for the political and other things it is usually the case that there is kind of or there some summary or links to what was discussed. I think it is better to have as much as, people are sick of doing things, you can not attend everything, and it is good to have limited time, and you will be more careful and probably have higher standards. It is nice when they record zoom sections, but I would not watch four h Zoom; that is not going to happen.	IF
27	SK	So you can avoid?	
28	R3	Yes, pretty much.	IF
29	SK	okay, Interesting. So, when it comes to information seeking anxiety, some people may feel anxious when they can't really find the information they are looking for when they use mobile social media. So, what you think about that. Is there any way to improve this kind of problem so they can easily find the information they are looking for.	
30	R3	Honestly, I think just the solution could be better search capabilities. For example, Instagram, I thought two or three months ago, they updated the app where you can search posts. Instead of just searching a #, you can just actually search for captions now. And so stuff like that, I'm not sure if people are aware of it because they have not advertisement very well. I only know that because I work in social media. I need to keep myself updated on this kind of stuff. I think that like if you are looking for politicians accounts and the information on there on Twitter, you can search and customize so many things. But like, knowing what to search for, people might not know how to do that. In terms of anxiety, I think that uhm I don't know. I honestly do not know. I'm not sure because. I think people who tend to be anxious is older people that are over the age of people. It is not generalized, but I think people who have accessed personal technology are like in their 20 or 30 they can always find things. For me personally, I know people or my friends that did not wanna pay for textbook, so they keep looking for over an hour on the internet. And they always did. I feel like our generation is quite "savy".	IS
31	SK	Okay, so you think there is a difference between older and younger people regarding information seeking anxiety?	
32	R3	I think so for sure.	
33	SK	So, moving on to anxiety regarding information security, Is there any policy implemented to avoid anxiety regarding information security?	
34	R3	I think, ehm, I don't think the government is doing a great job in Canada. I can't think of it, but one thing that has done a big effect is the GDPR in	AS

		Europe. It was kind of annoying at one point, a year ago or one and a half year ago, when you were getting all these emails about updates in term of service, but the fact that you know, the security and personal information and stuff, are taken more seriously in Europa. It means you know. In North America, they are reaping the benefits kind of. Facebook and Instagram have been more transparent. If they have updated settings, then you can change some sort of things. So yeah.	
35	SK	Do you think there are more solutions to implement to decrease the anonymity regarding information security?	
36	R3	Uhm, Yeah! I think that people if they have more awareness of how the like apps works and the policies and their anxiety will be reduced. But at the same time, for me, it is out of sight. If you can see the impacts on how your data have being put, then yeah, people would not really care if they understand how their information is used. Does that make sense?	AS
37	SK	Oh yes, of course, it makes sense. Okay, so for the self-efficacy. Do you think your social media platform ever consider that people may have a different level of anxiety when receiving information?	
38	R3	Uhm, yeah. I think that definitely because some people enjoy posting a lot and reading a lot. At least in my friend group, people feel anxious o guilty that they are not posting a lot about politics or like social Addresses. So I think that I know some people who will be stressed out because it makes it looked like they do not care about these issues when they post only about regular day to day stuff. But I don't really think it is; you should not force it. You can tell when it is not genuine. You can tell when people are pretending.	AS-SF
39	SK	Do you think there is a solution, or do you even mean when you work? Do you think about this type of thing when you work?	
40	R3	Uhm, I think the solution would be for people; instead of focusing on posting on social media, they should focus on the things the actions of they do in real life or the conversation they have in real life. Personally, I don't really feel guilty when I don't post on sort of things. I know that I know that I speak up about things in real life, it is not like I mean when I have the opportunity, I do tell like, "Oh have you heard about this going on". So for me personally, making sure that I just talking the talk I actually walk the walk. But for other people, I think just talking offline	AI-SF
41	SK	So you do not thing there is technical solution?	
42	R3	There is not, Because really, if you just you know you can post everything. If you feel you have to post about everything, then you will never stop stressing yourself. So I think the only way is to do things offline. Have a balance. You said how I think about it when it comes to working. I think for work, as much as you want to keep up for a date, it is more about high quality over quantity. Just making sure that we take the time to have like high-quality images. If people don't wanna constantly keep scrolling, then it would not be high quality.	TS

43	SK	Interesting, so you know there are many users worried about the amount of time they spend on social media. And I guess we all might agree with that. What do you think about this? Is there any solution that might increase this type of problem?	
44	R3	Yea, did you say if there is any solution?	
45	SK	Yeah, I mean, there are many people that feel anxious when spending too much information on mobile social media? Do you think there is any solution to increase that or?	
46	R3	For example, apple kind of really has the screen time function. If there was a way to lock the screen time or you can put the kids lock on. If there is a way to lock yourself from some sort of apps physically. Or if they had the time of people in sort of ages like if you are younger then 18 then you can only use the app for maximum 2 hours. But they are not going to so that because the whole point of getting people to use all these apps is because they get add revenue. So I think won't; they care more about making money. For me personally, I think or sense I started doing social media management full time when I started university. I've been using social media less. Just because when you work with it and spending all day analysing it you don't really have the energy to have like be doing your own personal stuff, for me personally.	TS
47	SK	So, it made you avoid social media since you work full time?	
48	R3	Yeah, pretty much yeah. Yeah, I think that if people wanna use it less, One thing they can do is to do it for work, haha Then you would not use it that much.	
49	SK	So, some of the respondents said they feel more anxious when using a sort of social media platforms due to their functionalities or other attributes. Like Facebook, they do have a lot of functions and people who started using the platforms having a hard time understanding. Do you have any thought according to that?	
50	R3	I think it is a huge problem, and yeah and Facebook, and we are many people that have used it in the past. But now, when you klick something, there is so many things you can't really keep control of. And a good example for this is actually Zoom; I hate Zoom, haha It is fine. We are using it now. But when someone posts an event, then I'm less likely to join if it is Zoom. Like, I prefer to live or google hangouts if that makes sense. Just because there are too many buttons on here, especially for school stuff. Like I did not know how to use it first. Not because I could not learn. It was more that I did not want to. It is not user friendly as far as a concern. Google hangouts have like 4 bottoms max. There is just to many things. People get stressed out when they don't know how to keep up to date when there are new apps.	AP-TA
51	SK	So, you think that too many functions make people more anxious.	

52	R3	Yes definitely.	
53	SK	So, do any of you others have any question to ask?	
54	JD	Yes, I have one questions. When you communicate different social media platform. Have you considered this phenomenon is getting increased nowadays? Like do you have any special meeting to discuss this problem?	
55	R3	Umm Hmm, I think the biggest issue with ads and stuff is stressing people out and the amount of time they spend. Things change too often, and honestly, if Twitter did not have updates and people have the time to get used to things, like Instagram, then people will be more engaged and have a better experience in terms of, I mean, I think that is a solution. I'm not so sure if companies are willing to do that. Did I answer the question? Otherwise I can say it again?	AP-TA
56	JD	Yes.	
57	R3	Okey cool, I feel like I did not answered Sumaias questions well, haha. Hope it is useful	
58	SK	Of course, you did. There is always something.	
59	AC	I have one question; you said the security issue that one way to work with is making people more aware. So, I was just wondering how to make people more aware.	
60	R3	How to make them more aware.. hmm? I feel like people that people will be more aware of people hmm, if there is more customizability on their apps if that make sense. Um, so like with Facebook, because of GDPR, you have to go through and select some sort of things in terms of privacy. And so like if, for example, I had to like select some bunch of settings or tracking my location, then I would be more curious on how to like or I would be googling on how these things work. So I think customizability is a good solution. But again, customizability leads to like for some company it would decline som ad revenue, so I think that's probably a big barrier.	AS
61	SK	Now I thought about something, but when you work with social media? You do not really care about the users because even though you have this type of security, the security guidelines, you don't care if the users know about them or not?	
62	R3	In some way, yeah, some people get scared and anxious. As much as it is good to learn, like um, it might overwhelm because there are so many apps and so many things. I think people just get scared. I really don't know. I don't think the way social media exist right now. I don't think there would be a balance between security and privacy with like anxiety. I think it is just about profit the priority goes.	AS

63	SK	Yes, okay. So do you think Information anxiety within mobile social media? DO you think it is worth investigating? Do more research, and so?	
64	R3	I think so, But I think that it is done by people who are old. I think I'm kind of ages, but some professors in university would never understand how TikTok works.	
65	SK	Okey, Anything else you would like to add?	
66	R3	Uhm, I used to like work with social media and communication. Im starting to dislike it because it is like, I don't know, It is fun, but it is constantly changing. It is kind of annoying at some point.	BP
67	SK	I do not know if this is a private question but do you feel anxious when you work there?	
68	R3	Uhm, I feel anxious only if it's political stuff uhm, so the last two jobs I had was political-related. When I was working for Google, one of their product in Toronto was for privacy stuff, and I was stressed out, and people were constantly expecting a response. But if it is for personal use, then I don't really care.	AS
69	SK	Okey I see. Perfect. For my side, I want to say a massive thank you for participating in our interview and give us your time.	
70	R3	No worries. Let me know if you want me to help with something else	
71	SK	Thank you so much again!	

Appendix 9 - Respondent 4

Row	Speaker	Transcript	Code
Interview Transcript (E4)			
1	AC	Do you wish to be anonymous?	BA
2	ST	Do it is fine, you can use my full name.	BA
3	AC	Background questions, how old are you?	BA
4	ST	I am 29 years old. Can you hear me okay or is it lagging?	B-A
5	AC	Okay. So what is your background and educational level?	BA
6	ST	So I have a business degree from Gothenburg University within business and economics and I specialised in both finance, and then later on in marketing so two bachelor degrees on that level.	B-E
7	AC	Okay, and you work for na-kd now right?	BA
8	ST	Yes so now I am the PR director for na-kd. Ops sorry I have to turn off my slack so it will not mess up our interview. So okay, yeah I am the PR director for na-kd since january this year and previously, before that I was the head of PR for Hästens beds since 2017.	B-P
9	AC	Okay, so you said that you work with PR but could you give us a hint of your responsibilities?	BA
10	ST	Yes absolutely, so I set the global strategi for na-kd within the PR-area and I am also responsible off our PR-agencies which we work with in different markets, within our most growing markets at the moment. Which is the german speaking countries and within the benelux, which is the Netherlands and Belgium. But I also deal with all of our media relationships in form of traditional media such as publication, TV and radio, but also the new type of media which is more social media profiles and all those platforms so it is a lot of variety within my position.	DI
11	AC	Okay yeah I can hear that so for the first subject of ours is disinformation. Have you ever heard of disinformation, regarding the fake news and false information nowadays?	
12	ST	Yes definitely, or fake news... I would say tweaked news at least, I have a lot of experience when maybe doing a interview and it is tweaked in a way or, it makes it sound completely different. To drive sales within sales or headlines that drives more clicks or readers so I would say yeah fake, but	DI

		for fake news no but it is tweaked news so it kind of becomes fake news for the reader.	
13	AC	Do you think mobile social media has accelerated this kind of problem?	
14	ST	I think so yes since it is very hard to find the right information or the right information from the actual source. So I think it is a huge risk today of the massive spin-of that gets on news, both fake and real news on social media and that many people are not aware or see the bigger picture of it before taking stand or judging the news. So I think that is... not an issue today but I think it is something we need to address more on how to teach the younger crowd or the crowd that is really, really looking into news, only through social media platforms. That to maybe looking at the source a bit more and where the news actually come from.	DI
15	AC	So it this something you work with daily within your position?	
16	ST	I mean, it is in a way since I do a lot of media interviews and for me, I am very keen on always reading my qoutes in afterwards to demanding that. Also to see that it is not tweaked in any way or, that it's actually saying what I meant to say, because that is very important.Of course a journalist can always write what they want from that interview but you always have the right to always, at least, read your quotes. So if it is quoting you as a person it should be truthful and I am very keen on that and that is the closest I get to false and truth news I would say. But also of course I have, I dealth with a lot of PR-crisis, both at Hästens and na-kd. Where a rumor or something like that can become aggressive and big and have a wide spread of readers and I would say that it is very important, even if you are a company or a private person and speak up and answer on imerse, false or truth news. With the actual truth.	IO
17	AC	Okay so the next subject is information overload. According to our survey respondents, a large number of them think there is so much information nowadays circulating on mobile social media, including endless notifications, what do you think of this problem and do you have any solutions within your company?	
18	ST	I mean it is hard to say, it is a lot of buzz outhere and everyone is trying to reach the end consumer through these platforms because you are especially asking about social media right?	IO
19	AC	Yeah	
20	ST	Yeah so I, mean I know that a study showed that you have a couple of seconds or something like that with peoples attention today which is very few seconds. Comparing to back in the days where you got peoples attention more and I belive that, if we speak of me as a private person to deal with that, I always turn of notifications for example and I never have them on because I cannot focus on my daily job if I'm constantly updated from notifications from social media. Even a fitness app reminding me to workout or whatever. But as a company at hole I would say, of course we	IO, TS, & MS

		want to be out there, reaching our end-consumers butI think, looking at the feature, how we will address our end consumer is to, when we have the attention, use it wisely. Teach them something, not only spamming to sell a product rather to give them something which is valuable. Teaching them something or give them some recommendation. I know that the millennial therapist, she has over 500 thousand followers and now and she just gave people a quote, a daily reminder on a post which people really appreciated and she grew. She is a therapist so this was within self-love and self-development but as a hole, I think you have a responsibility, taking peoples time like this and constantly spamming them. That is something I want to see na-kd to go towards for example and also looking at Hästens when I worked there. We were talking about how to improve your sleep because people have a lack of sleep and weather by just say by bed we said that these are the top three beds for you to improve your sleep. To actually be an expert within this area and people get a good vibe for the company.	
21	AC	Okay, I think you somewhat answered it already but, do you think it is complicated to get your information across when there is a lot of information on these different platforms?	
22	ST	Do you mean the information we want to reach the end consumer with?	IO
23	AC	Yes exactly.	
24	ST	I mean, yes since it is so much buzz outhere thats what I mean, we have to be very. In order to be able to reach these number of seconds with attention, we need to be strategic on how to work with the messaging. But it definitely is hard to get the information out there. I mean at na-kd we have reached almost four million follower in our different platforms, which is huge, and we are extremely grateful because it makes it easier for us I think regards a company which does not have the same kind of engagement and followers. But this is also something the company have built up so it makes it easier for us so both yes and now. It is getting harder but it is also quite easier for us because we have this big big platform with followers.	IO
25	AC	Okay. The next subject is information FOMO and some social media users may feel left out when they see posts on social media about events that they didn’t attend or information they missed, how would you work with this phenomena within your company?	
26	ST	I mean it's the same thing there. I think we are going away from the perfect instagram feed's to more trustworthy and real feeds. Which means that people, I think as a company, takes responsibility to actually show the ugly truth sometimes, The behind the scenes sometimes to make people understand that this perfect world isn't real. It is a person or a companies alter ego, you only show the best side. I think that is what we are heading towards with social media. That is why I think TikTok is such a huge phenomenon, because you can't edit it. You can't make it perfect. You are just there to have fun and you spend massive amount of hours just dancing and being creative or whatever. So I think that Instagram, if we where to	IF & MS

		choose a platform, is where the largest amount of FOMO in missing out. Because it is very filtered, which is the hole point of theplatform, to show the best side and to do branding, for you as a person or as a brand. So as a company, to take that responsibility to sometimes show that it is not real. To show a reminder to people. Like when we are doing amazing shuts with amazing looking models everyday, with clothes that fits perfectly. Maybe to show behind the scenes to perfectly. Maybe to show behind the scenes to show that someone is actually holding in that sweater to make it look perfect. So, to just have fun with it and show that it looks real on the image but to show that this is the actual truth. To work with something like that, is something that we, as a company can take responsibility for. And also to shoe diversity, how many cool employees we have behind the scenes from all different parts of the world, that is something people don't know about. Which makes it all more relatable then just having blond swedes, just to show that we are all different and that we have the same type of diversity internally also.	
27	AC	I will now move on to anxiety provoked by technical attributes. Sometimes respondents said they feel more anxious when using certain mobile social media platforms due to their functions, layouts and other attributes. Do you have any thoughts? So when ju mention Instagram and TikTok, do you think it could be a comparison there?	
28	ST	Definitely, I mean I barely scroll down my feed anymore. I have worked with it so much that I know that I am just wasting my time, looking at post from people and their perfect life, which isn't perfect. So it drives a lot of anxiety,we can see that with data today and people spend a lot of time on these platforms. But I think that going away from that and to speak as a company will change the hole narrative and the hole purpose of the platform, which we can see. Why Youtube and TikTok is growing is because it is more personal, you can speak up, you can dance, you can teach someone something and in Youtube series, you can learn how to do it yourself. So to avoid anxiety is defenety to stop scrolling in your feed and waste time. I personally don t do it, I look at stories from my closes friends and some business contacts, which I have to have in my jobs. I use it more for job purpose and therefore not checking the feed, because it drives anxiety or it creates a need for getting things which I actually don't need in my life. It creates a desire for more and I am super grateful for the things I have in mylife. It creates a feeling of not-gratefulness which I don't like, I think that we therefore can take that stand for ourself or we can decide to scroll and feel anxiety. It is designed as a drug so either take the drug or not.	AP-TA
29	AC	That is some really interesting thoughts. So another thing we have is called Anxiety-inducing self-efficacy and do you think your social media platform ever considered that people may have different levels of abilities to be anxious when receiving information?	
30	ST	I didn't understand the question.	
31	AC	Do you belive that some different software developers of different platforms take into account that some people feel more anxious and	

		therefore they can do something about it.	
32	ST	Yes, definitely. I don't know if you have seen it but the Social Dilemma, it is perfectly designed to trigger us i the way to make us to consume more. So my feed looks completely different from yours because it is designed to trigger our own triggers, depending on what we have liked and engaged on. So yes definitely, some feel more anxiety and others and it is up to us to what we follow and engage on. For me, I love to work out so I have a lot of inspirational videos which I save or something like that and of course my feed is spammed with this perfect bodys or workout videos, which could lead to anxiety. "Why donät I look like that?" or "Maybe I should work out even moore". That I why I have taking the stand to not check out suggested feed. I feel like I have the videos I need, I have saved them so I can bring them up when I actually are doing a workout. I think we need to take control over it, to understand the psychology behind it, the development behind it and once we do, we can take an active stand to not look at it. Because it is designed to trigger you so you kind of choose to either look at it and feel bad or how you want to use that information. If you want to save it for different purposes or not to look at it at all.	AI-SF
33	AC	Before the last question, do any of my colleges want to ask anything?	
34	SK	Yes I do have a question actually, so if we go back to the beginning, when you were talking about rumors circulating, about some specific company. When you come across this kind of rumors circulating, how do you really deal with that? Do you think it is easy to reach out with the right information through mobile social media or... Since it is easy to share false information nowadays about different things so how do you, as a company deal with that?	DI
35	TA	I mean it is a quite hard situation, it depends on situation to situation. I have dealth with it at both Hästens and at NA-KD and what I have learned is to always go to the bottom with the problem with the rumors. In a real and a trustworthy way and for example, For NA- KD, when we had the PR crisis in december, I wasn't at the company I started in January, but that we did was a investigation of the company. To get the true statistics and information about how the company is actually doing in these areas. We used a consulting agency which did a deep investigation, though the hole company and they interviewed 94 people at the company, to go to the bottom of everything. Which I think is good, even if it took 1-1,5 months to get a report of it. It shows how wee should address the problem, here is where we are lacking or here is only rumors. Or we maybe lacked within these areas a few years ago but people don't sense this problem anymore at the company. So always start by going to the bottom of the problem, to find evidence, number and data and then create a action plan and going out to the public. We are lacking here and these steps will we do to fix it and have a clear action plan before going out to the public. But also to honestly say,here is where we are not lacking this is rumors. Because it is also important to not go into complete silence and say that we did wrong because think it is important to separate them, here is the rumors and here is where we did wrong. Because a created rumor on social media can become huge and destroy companies and destroy peoples jobs. Therefore it	DI

		is important to work with them both. Was that the answer to your question?	
36	AC	Yes very well, thank you. Okay so one quick last question about information security. Is there also any function or solution companies could implement to decrease the anxiety?	
37	ST	Yes I think Instagram have done it where you can hide notifications from people and still follow them and to hide their stories. I definitely think that these functions within the platform is supergood and I think you will come more towards that. Like for me, in my position I follow certain people since it is good for me as a PR manager, I have to keep relationships with social media. But if someone is posting something which triggers anxiety or making me feel bad but I still need to follow that person, I think it is great that you can just shut off their posting in my feed. So therefore I think that they could develop them eve further.	IS
38	AC	Okay.	
39	ST	I know that it could be irritating because they decide to not show post which you haven't engaged in before which could be close friends. It is developed to drive sales in the end.	IS
40	AC	Okay, so thank you for this Interview!	
41	ST	thank you and I hope this gave you something valuable. Please share with me before publishing so I can read it through so I can edit if there is something.	

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