

Young children on TikTok: An interview study of Finnish parents

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Abstract

Social media has been in an era of change since TikTok has entered the market with its virality. TikTok is most popular among younger children aged between eight and twelve years old, the platform has gathered attention of many. Both research and media have shown their interest around the topic. Research has publications from multiple different disciplines ranging from medical publications to studies done in the field of humancomputer interaction (HCI). This study investigates what possible threats TikTok can bring to children and what is the parents' role in addressing these threats. By identifying these threats can they be lessened and discussed to promote healthy social media use among children. A semi-structured interview was conducted with five Finnish parents to find out what the parents are doing to guard their children from TikTok's threats and what threats have the parents found to come true regarding their children and TikTok use. The results indicate that parents believe TikTok is prone to promote addiction and eating disorders. Stranger danger, cyberbullying, harmful content, anti-privacy advice, unhealthy marketing, hate speech and misinformation are also possible threats of TikTok use for children. The possible negative effects of TikTok for children are varying and parents have a leading role in moderating social media use of children. Communicating and educating the children is to be highlighted and parents need to model a healthy relationship with social media for children. Future research should further investigate how addiction can influence children who use TikTok. Also, the technical solutions to protects children from threats on TikTok is a worthy research area for future.

Keywords

Children, TikTok, online safety, threats, parents

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Foreword

This thesis has challenged me both mentally and physically in regards of hundreds of hours spent on the computer with aching back pain. I was feeling like at any time I am going to lose my mind while thinking over and over again how did I end up in a situation where I have a month to finish this work while I almost lost a finger two months ago when I still was on time with the work and had a working hand. This thesis has since grown on me as we have spent a lot of time together. This thesis means more to me than it will ever mean to anybody else. Yet, I hope that you could see my tears and sweat all over the pages but that will not happen. Therefore, I want you to imagine a twenty something year old woman crying happy tears, hunching over the computer like an eighty something year old lady writing her foreword with 9 working fingers, while holding a furry friend on her lap. Even though it has been a rocky road to this point I would not want to change anything. I of course should thank everybody that have helped me to build this thesis, but instead I am only going to thank my mom for being my mom. Only my mom knows what demons were battelled while I was putting together this paper. My hairy friends and not so hairy friends are also to be cherished, they kept the smile on my face when I was not able to do it on my own.

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1. Introduction

In the last few years, on top of new innovations emerging continuously in form of new technologies, social media has been in an era of change. TikTok has entered the competition to be one of the most popular social media on the market. It is a social media platform developed in China that gives the users a possibility to download short video content on the platform (Ling, 2022). TikTok has gathered attention from academic publications to news ever since its popularity began in the year 2020 when the world was closed into lockdown as COVID-19 kept people tightly indoors. The 27th of September in the year 2021 was a great day for TikTok, as it celebrated 1 billion users worldwide (TikTok, 2021). Having gathered over 1 billion users monthly in five years, TikTok reached this milestone faster than YouTube, Facebook, or Instagram (Dong, 2022). In Finland TikTok had 1,2 million users in the year 2022, having grown its userbase with over 200% in one year (Rajamäki, 2022). It is for certain that TikTok is a viral platform that is only going to gather more users in the future. Even though TikTok is not – at least yet – the most popular social media platform, for children aged from eight to 12 years it is. TikTok is known to have more underage users than other social media platform on the market, such as Snapchat, Facebook, or Instagram. (De Leyn et al., 2021) This popularity and speedy journey from a small social media to a huge one and the underaged users have stirred up conversation among scholars and media. Discussion around the challenges to protect privacy and children's propensity for reckless disclosure behavior have raised concerns over children's safety on this platform (De Leyn et al., 2021). Also, TikTok's legal controversies involving children's privacy rights are motivating the need to find solutions to better protect children on the platform (Johnson, 2022).

This sort of conversation is only natural as for the ever changing and evolving customer base from children to elderly users the importance to study the suitability of new social media platforms is great. TikTok is seemingly innocent, but it has been a subject of troubling reports regarding its content which reportedly includes e.g., child predators, devious algorithm, cyberbullying, and lack of privacy. The platform hides a more sinister side as it allows a steady stream of predatory messages, animal cruelty and drugs. (Weimann & Masri, 2020) For the vulnerable user group consisting of children, it is necessary to establish knowledge on possible negative effects if the social media platform has i.e., possible threats and security issues.

1.1 Motivation

Unfortunately, one of the reasons why TikTok has been gathering a lot of space from media in form of news and posts is that there have been harmful incidents involving young children on the platform. The incidents involve young children engaging with strangers on the platform. (Badillo-Urquiola et al., 2019) On top of media, researchers around the world have been giving TikTok and its young audience attention in regards of published research papers. Some themes rising from research regarding threats and children on TikTok are stranger danger (Badillo-Urquiola et al., 2019), hypersexualization (Soriano-Ayala et al., 2022), eating disorders (Pruccoli et al., 2022), cyberbullying (Anderson, 2020), anti-privacy advice (Wei et al., 2022), and hate speech (Weimann & Masri, 2020).

Media is also actively investigating and discussing TikTok, presenting topics that tell a different story for TikTok's fun and playful public image. In an article from the Guardian, it is told that for failing to protect the privacy of children TikTok might face a fine of £27 million. The Information Commissioner's Office (ICO) found that TikTok might have

breached a data protection law between the year 2018 and 2020; by processing under 13 years old children's data without parental consent and failing to give proper information to the users with a transparent, concise and easily understood way. (Sweney, 2022). In the same year an article from Forbes discusses how some accounts on TikTok showcase some of the most disturbing and dangerous content on the internet through hidden portals, containing i.e., child sexual abuse, grooming and accounts where sexual predators can meet and share illegal images (Levine, 2022). Here are just two articles but there exists many more which present the same themes as these.

Scientific publications and news articles discussing these issues are not to be taken lightly and can be overwhelming to even read. As a video platform, the special feature of TikTok is that users watch videos from strangers on top of chosen friends, this gives a possibility to spread content of abusive nature in new ways without being caught by moderation (Weimann & Masri, 2020). In a study by De Leyn et al. (2022) the interviewed parents spontaneously said to not suffer from overbearing privacy anxieties over their children disclosure practises. And TikTok was seen as a networked public that provides relatively playful and innocent content. (De Leyn et al., 2022) Harriger et al. (2022) give recommendations for e.g., parents and researchers on how to protect children from the TikTok algorithm and content provided by it, they argue that the ultimate responsibility to protect users is on the shoulders of the social media corporation. (Harriger et al., 2022) This master's thesis is an attempt to take a step towards finding out what are the possible threats of TikTok use for children and into what extent parents should take steps to protect their child.

1.2 Research problem, questions, and method

The research done around the topic TikTok and children conducted by interviews with parents or children is rather small. Out of the research papers I selected for this thesis, one of them interviews parents. This is the work done by De Leyn et al. (2022) where they interviewed Dutch-speaking Belgian children aged eight to 12 years old and their parents. Interviews done with children are as rare among the research papers selected, Soriano-Ayala et al. (2022) interviewed Spanish TikTok users between eight and 17 years old. Hence my research is standing out with the selected research method.

This thesis is a qualitative study where the data gathering is done by combining a literature review with semi-structured interviews with Finnish parents. By interviewing five selected parents I gained deeper knowledge on parents stand on TikTok and its possible harmful effects it may have on their children. Even if TikTok has gained a lot of space from medias topics and researchers have also given their fair share on it, it seems that parents have not yet been given a voice on the topic in scientific publications. Therefore, I want to try and shed light into some of the threats that parent might think their children are facing on this social media platform. The research questions I am aiming at answering are:

- 1. What kind of threats to children's safety in TikTok are Finnish parents concerned about?
- 2. What is the role of parents in addressing the possible threats?

1.3 Structure of the thesis

The thesis first presents the previous research done around the topic in a form of literature review, after this the methodology is presented. After these the findings are summed up

following the discussion and lastly conclusions, with recommendations for future research and practical suggestions for professionals working in IT.

2. Previous research

This section presents an overview of the social media platform TikTok, after which previous research is presented on the topic of threats which researchers have associated with TikTok.

2.1 Overview of TikTok

TikTok shortly describes itself to be a leading destination for short mobile videos their mission being to bring joy and inspire creativity (Our Mission, Nd.). Owner of TikTok is Chinese ByteDance. TikTok was published in the Chinese market in 2016 and worldwide in 2018 after it merged with another Chinese platform Musical.ly on the 2nd of August same year. (TikTok, 2023).

TikTok allows its users to create short videos from three second to 15 minutes The videos are either private when only users' friends can see them or public when anyone with an account can watch them. Users can like, comment, save and share these short videos. The platform also gives user the possibility to use direct messaging between friends. In the year 2020 TikTok launched a "family safety mode" for parents to control children's digital well-being. This includes restricted mode, a possibility to limit direct messages and manage screen time. (TikTok, 2023) Family safety mode links parents account to their children's and it enables three different features for parents use. Screen time management provides a possibility to control how long the child can spend time on the platform daily. Direct messages feature allows the parent to limit who can send messages to the child or turn off the messaging feature. The last feature is restricted mode, this helps the parent to restrict the appearance of content which may not be appropriate for all users. (Keenan, 2022)

Not long after publishing family safety mode a "family pairing" feature was also added, to help parents to gain educational recourses to have a sense of what children are exposed to on TikTok (TikTok, 2023). Family pairing gives the parents and children an opportunity to customize their safety settings based on their individual needs. Family pairing includes daily screentime feature with possibilities to set screen times directly from parents own account, setting screentime limit to apply in all possible devices the child uses TikTok with and set a passcode to disable the set screentime. The second feature of family pairing is screen time dashboard. The dashboard shows a summary of the child's time spent on the platform, including information about the times the child has opened TikTok and the cumulative time spent on the platform during the last 4 weeks. The other features of family pairing is the possibility to turn off the children's push notifications, restrict the child's exposure to content, define if the child can search for videos, Live videos or hashtags, decide if the child's account is public or private, choose whether the child's account is recommended for other users or not, restrict who can send messages to the child, choose who can view the child's liked videos and who can comment on the published videos. (User safety, Nd.)

TikTok states on their webpage in their community guidelines, that one must be 13 years or older to use TikTok. In the United States TikTok has also published a separate under 13 TikTok experience that gives limited experiences designed with added safety protection and a separate privacy policy. But this is only available in the US. (Youth Safety and Well-Being, 2023) It is also mentioned in TikTok's privacy policy that whether anyone believes there is a user who is under 13 years old it should be reported directly to TikTok (TikTok, 2023).

2.2 Threats and negative effects of TikTok

This section summarizes identified threats and negative effects from previous research regarding children and TikTok and presents them in their own subsections. A *threat* is defined as something which can accidentally or intentionally cause some harm and exploit some vulnerability in the process (Hartikainen et al., 2015). After this the parents' role in mediating children's online safety on TikTok is presented.

2.2.1 Stranger danger

One of the most used terms in previous literature was stranger danger. This has been used as a phrase for years to educate children about issues in physical safety by telling them to stay away from people they do not know as the strangers might mean them harm. (Badillo-Urquiola et al., 2019) And as it is shown in a survey from 2018 by the Family Online Safety Institute that parents from the United States rated "stranger danger" to be their top online safety concern (The Family Online Safety Institute, 2018, as cited in Badillo-Urquiola et al., 2019). Meanwhile among Finnish 9 - 16 years olds communicating online with someone they have never met offline is the most common online risk (Hartikainen et al., 2015). Most research states that teenagers are at a greater risk when it comes to stranger danger, but this might change as younger and younger children are entering the social media userbase than before. This can be alarming as children have more difficulties identifying the gender and age of other users. Therefore, they can be more easily misled. (Badillo-Urquiola et al., 2019) There is a real need for educators and parents to start and teach about the online harms and dangers even earlier age than currently. This includes discussing stranger danger, privacy issues and how online friendships can differ from real ones. (Bossen & Kottasz, 2020) De Leyn T et al. (2022) found in an interview study with parents that all of the interviewees did give children warnings about the possible stranger danger and possible consequences of giving explicit content unintentionally. Yet most of the same interviewee group had difficulties discussing sexual predators with their children as they felt that their children were not able to handle the reality of it. (De Leyn et al. 2022)

Badillo-Urquiola et al. (2019) aimed at clearing understanding on the awareness of children's stranger danger knowledge by conducting participatory design sessions with children aged eight to 11- years old. Younger children having knowledge gaps about risky online situations and relying heavily on their parents for help when facing them. When the children were asked to determine what stranger danger meant for them after discussing it in online setting, most of the children did not identify it in online context. They referred it to as something happening in real life e.g., stalking and abduction. This raised worry whether children on TikTok can identify stranger danger on the platform. The design mock-ups which were built as a part of the used children's ideas. Final products were parental mediation, asking for help and automated intelligent assistance. Five out of seven children highly disliked the parental mediation feature. Children were concerned that their privacy would be violated due to the transparency and authority given to parents. All but one child felt that parents should not be able to follow their children's activity online due to wanting their own personal privacy. (Badillo-Urquiola et al., 2019)

In a study where past TikTok users were questioned, a 19-year-old female expressed her concern about sexual predators, even though it was out of context in this study where the motivation to stop the use of TikTok was examined. The female had experienced extreme discomfort as a lot of creepy old men can be seen viewing and liking videos of young kids dancing. The conclusion was that as many young children and teens use TikTok, the risk of sexual predators on the platform truly exists. (Vaterlaus & Winter, 2021)

The recurrent figure in the anxiety of unwanted audience among parents as well, is sexual predators (De Leyn et al., 2022). As De Leyn T et al. (2022) contextualize the finding from their interview study, they underline the first and foremost aim of parents being to protect their children from external threats such as stranger danger. While the results from Badillo-Urquiola et al. (2019) research might suggest that the parental moderation is the least wanted feature to TikTok among children; it is well-established that parents mediate their children's media use and can perform as navigators on TikTok (De Leyn T et al.,2022).

2.2.2 Cyberbullying

Cyberbullying is defined as involving electronic communications aimed to the victim from the perpetrator (Mao, 2022). Cyberbullying can be identified also on TikTok, and several researchers mention it among the literature being a problem (Anderson, 2020; Weimann & Masri, 2020; Kansok-Dusche et al., 2022; Vaterlaus & Winter, 2021; Kriegel et al., 2021; Mao, 2022; Soriano-Ayala et al., 2022). Vaterlaus & Winter (2021) gathered answers from 18 to 25 years old users who have left the TikTok's userbase and no longer use the platform and users who are still using TikTok by conducting an online survey. Participants involved in the study described the videos shown on the platform and interaction on it has the potential to be harmful to users. This was categorized as cyberbullying among other explanations and the bullying focused on a person's body, their appearance, gender, disability, religion, and nationality. (Vaterlaus & Winter, 2021) On TikTok harassment, insults, toxicity, and jealousy are constant to the extent that a large part of the interviewees of Soriano-Ayala et al. (2022) said that they have suffered psychological and verbal violence and are familiar with a case of physical violence. And these can most certainly have a negative effect on the mental health and self-esteem. (Soriano-Ayala et al., 2022) Vaterlaus & Winter also found that some trends facilitate bullying and the most mentioned one among the participants was the trend of exposing someone. This exposing trend is described as toxic and dangerous as unflattering information or video is shared about a person without their permission. Yet, rather than the bullying happening mostly on the videos, the most usual place where the bullying happens on TikTok is in the comments. From the 128 participants who answered the follow-up questions, 33,59% had witnessed bullying and 6,25% had experienced it themselves on TikTok. (Vaterlaus & Winter, 2021)

With the power of trends cyberbullying is popularized, supported, and facilitated. On top of this with the help of the duet feature on TikTok, users can post mocking and mean responses side by side to the other users' video. These special features and trends make the cyberbullying on TikTok distintive when compared to other social medias. (Vaterlaus & Winter, 2021) Mao (2022) also identifies a new form of cyberbullying peculiar on TikTok, the so called "Spill the tea" accounts. These account focus on gossiping about their friends and classmates which leads to this new form of cyberbullying. As this sort for bullying penetrates the victims' personal lives thoroughly the consequences of it increases the victim's vulnerability. Cyberbullying is referred to as a plague taking over the teenagers in schools as it is troubling in many ways bringing different social issues to the surface. This sort of spill-the-tea trend is not only exposing privacy threats, but it also facilitates cyberbullying and makes its scope and effect more serious. Motivation behind these accounts is entertainment creation, revenge or punishing peers they do not like. Followers on the other end are curios or feel the peer pressure. Hence naturally the more followers the wider spread the bullying gets which only adds to victims' social groups. (Mao, 2022)

2.2.3 Hypersexualization

Sexualization is an act of sexualizing someone or something by seeing someone or something in a sexual term (Cambridge dictionary, n.d.). Another way to describe it is to see it involving a process by which the person's value is measured and given according to their sexual attributes, appearance, and their presentation of sexual disposition. When sexualization is exalted, increased, and promoted by the surrounding in which it is seen and the elements involved in sexualization multiply, one can speak of *hypersexualization*. (Soriano-Ayala et al., 2022) Sexualization is already discussed among media and research in the context of social media. Research done in Spain by Soriano-Ayala et al. (2022) focused their content analysis on the 12 most popular TikTok creators' content while conducting interviews with eight to 17 years old children. They found out that ten out of twelve pages of the creators showed sexualized content, in percentage this is 83.3%. Therefore, it is affirmed that TikTok is an environment prone to sexualization as there is a high level of hypersexualization in the most viewed pages. The authors also take notice to the fact that a large portion of children under 10 years have not had any teaching or explanation of any kind of code of conduct how to handle sexualization other than in terms of limiting the time of use. Yet the narratives of the children openly distinguish sexualization being a characteristic feature of TikTok content and hypersexualization is seen as a method to improve the virtual self. (Soriano-Ayala et al., 2022)

There is and has been for a period of time a difference between the genders over sexualization. The girls felt a bigger pressure to obtain the ideal image and were more compelled to make changes to their appearance. A concern for not fitting into body and beauty ideals exists, sexualized bodies shown on social media allow the accumulation of social value. This value is currently quantifiable and numerical and hence it could explain why fatphobia was mostly mentioned among children. Young women who present these stereotypes that show sexualization can most certainly be at risk and suffer of more virtual crime, insults, and harassment and in some cases gender violence. Meanwhile as TikTok is seen overall as a positive platform among children, they at the same time accept a climate which is prone to cyberviolence and reactivity. (Soriano-Ayala et al., 2022)

2.2.4 Hate speech and misinformation

Hate speech is described in Cambridge dictionary(n.d.) as: "public speech which encourages violence or expresses hate to a group or person based on something such as religion, race, sex or sexual orientation "(Cambridge University press, n.d.). Kansok-Dusche (2022) suggests that hate speech should be separated from non-physical form of bullying e.g., insults. The specific difference between bullying and hate speech is the related verbal expressions content. Insults disparages the individuals' characteristics while hate speech denigrates a specific social groups characteristic. No matter the age, race, religion, or sexuality hate speech can most certainly affect individual negatively. Yet, the age group to be deemed especially vulnerable to the harmful effects of this phenomena are children and adolescents. The negative feelings that hate speech supports online among children are identified to be anger, shame, or sadness as well as lack of trust. (Kansok-Dusche et al., 2022) At the moment all social media platforms are struggling to handle the issues regarding hate speech on their platform and keeping users safe from harm, threats, and harassment (Anderson, 2020). Small fraction is known about research done regarding children and hate speech but it is known that even if cyberbullying and hate speech have share features, they only partly overlap empirically (Kansok-Dusche, 2022)

A similar sort of category of hate speech could be said to be *misinformation*. Misinformation can be described as misleading or false information that is shared unwittingly. *Disinformation* is misleading or false information which is purposefully made and shared with the goal to deceive or harm. Mis/disinformation shared on social media has supported violence and crime against ethnic minorities in Myanmar and it led in deaths and displacements, including children. The popularity of TikTok among children has worsen the risks as even younger children are being exposed to dis/misinformation through their interaction online. Children themselves are sharing, creating, and amplifying mis/disinformation usually with their peers and TikTok can act as a place to share information without their parents knowing while the platform is marketed as fun. (Howard et al.,2021)

2.2.5 Self-harm and eating disorder related content

Logrieco et al. (2021) present, with a quite different approach, a case study involving an Italian 14-year-old girl. Her story is described in detail beginning from laxative misuse in April 2020 to being admitted to Department Paediatrics on Bambino Gesu Children's Hospital in Rome for specialized care done by psychiatrists. The aim of the study was stated to show how social media, in this case TikTok, can promote self-injury and feed the eating disorder as once the user sees a video dealing with anorexia in the homepage the algorithm will continue to suggest similar videos. This contributes to the creation of obsessive behaviours. Unfortunately, parents are usually unaware of this sort of behavior and the authors underline how easy it is to face harmful messages directing both mental and physical health of children on TikTok. (Logrieco et al., 2021)

A more technical issue regarding eating disorders and TikTok exists, the algorithm which gives the user endless amount of content that fits the users wants and needs. Harriger et al. (2022) investigate how social medias such as TikTok's use of algorithm can intensify the negative effect on body image as the user is given personalized content, which is usually more extreme, designed to keep users engaged longer and less monitored. As a conclusion Harriger et al. (2022) link social media use and higher body dissatisfaction together and add that the use of algorithms adds gas to the flames of this relationship and while the authors give recommendations to different groups that could help the situation, the solution will come from the organization. Ultimately the social media corporation creating and implementing the algorithms need to take big steps toward safety, protecting their users from any harm and to turn the view from addiction to users' well-being. (Harriger et al., 2022)

2.2.6 Anti-privacy advice

Wei et al. (2022) investigated anti-privacy videos posted on TikTok that share advice on how to surveillance or control others with technology. One of the interpersonal contexts studied was parent-child relationship. Videos targeted for children motivated to enable tracking or restriction with a desire for better autonomy, especially in the case of restrictions such as app usage and tracking software e.g., for location on their phone. Motivation to hide their apps and messages from low-tech monitoring such as inspections made by parents, was high among children. (Wei et al.,2022) The findings from research by Badillo-Urquiola et al. (2019) on the unwanted parental moderation design mock-up goes hand in hand with the motivation addressed in Wei et al. (2022) research, as if it would be common for children to not like their parents knowing about their activity on TikTok. In the research of De Leyn et al. (2022) it was said that parents are feeling like they have lost control over their children's life trajectory and are having issues with a

perceived loss of household's protective bubble in the digitalized society of today. (De Leyn et al, 2022)

Wei et al. (2022) present three different anti-privacy techniques they spotted among the material, these are: disrupting location apps, bypassing parental controls and hiding activity with OS features. The main goal for teenagers was to evade the surveillance or restriction set for their devices by parents. There were number of ways found to disable tracking apps, one example was to connect a tracking app Life360 to another device which could be left at home. (Wei et al., 2022) This is without a doubt a concerning finding as an application such as Life360 is a tool for parents to monitor whether their children are safe online without disturbing the child's freedom. Methods to bypassing parental controls such as restricting screen time, access to certain websites or app downloads depending on the software and configuration of parents e.g., a way to guess the screen code of a phone by making the screen first dirty and then asking the parent to unlock the device. Fingerprint marks are left, and the guessing began. After logged in the technique described how to disable VPN from in the system settings so no message or web history can be seen. Last technique involved Apple devices iCloud logging out and logging in with a new account to reset the safety settings. This focused on hiding digital activity with OS Features, iOS feature enables the user, in this context, a child to hide applications from the home page screens. This is used if their parents would do a manual check on their children's phone, with this technique the parent would not be able to see the selected hidden applications at first glance. (Wei et al.., 2022)

2.2.7 Children and TikTok marketing

It is unclear how young children can be empowered to critically cope with a fairly new form of persuasion - influencer marketing - and the amount of research done to study how it affects young children is almost inexistent. (De Veirman et al., 2019) Yet the influencer marketing is only growing and coming more popular among the most used social media, including TikTok. It should the highlighted that as children under 12 years have limited advertising literacy skills, they are a fragile target group when it comes to persuasion. Unhealthy marketing can be intertwined with e.g., unhealthy food consumption. (Brooks et al., 2022) On top of influence marketing, study by Brooks et al. (2022) shows that TikTok is a rising source of unhealthy food marketing. The authors also underlined the young userbase of TikTok and the fact that policies are needed to guide the marketing so that it would not harm children with its food marketing strategies (Brooks et al., 2022) Also Dunlop et al. (2016) pushed the importance to educate parents and children about the extent and nature of social media marketing in a study from year 2016. While social media marketing may have negative impacts on children e.g., tobacco, alcohol, and energy dense and nutrient poor food consumption habits, effective and adequate regulation of social media marketing comes with many challenges. (Dunlop et al.,2016)

Influencers are seen as something which their followers regard as admired and popular, and while children are following their influencers, they are exposed to embedded advertising practices. The amount of this is only increasing. Influencers and their message are perceived as highly credible rather than marketing speech. Children aim at taking on their attitude, beliefs and lifestyles including products that appear on the posts of these influencers. The content shared on the influencers post can affect children's behaviours and attitudes e.g., their snack intake. (De Veirman et al., 2019)

2.2.8 Addiction and challenge videos on TikTok

While parents showed concerns on the possibility that their children could get addicted to the so called "like culture" of TikTok in a study made by De Leyn et al. (2022) a narrative review by Pedrouzo & Krynski (2023) remind that the narrative of addiction cannot be limited to chemical substances, as there are behavioural habits which may form dependence and seriously interfere with users' daily lives called behavioural addictions. (De Leyn et al.,2022; Pedrouzo & Krynski, 2023) And TikTok is addictive (Kriegel et al., 2021; Marengo et al.,2022). Marengo et al. (2022) found out in their study that children who informed to use TikTok while using other highly visual social media, typically showed a higher risk of addiction on social media than children who did not use TikTok. (Marengo et al., 2022)

The amount of research done around addiction, TikTok and children is small and so is the amount concerning children and challenge videos seen on TikTok. Kriegel et al. (2021) state that the "internet challenges" are rapidly being disseminated among the paediatric social media communities. Usually these challenges are not dangerous, but some can influence the health and wellbeing of participants, sometimes proving lethal. One identified high risk internet challenge is the "Benadryl challenge" where the challenge takers consume multiple doses of antihistamine diphenhydramine (Benadryl) in hopes to hallucinate. Overdosing Benadryl can have severe health repercussions for children e.g., heart attack. One American 15-year-old girl has passed away in 2020 after participating in the Benadryl challenge. Adolescents are very prone to the influence of these challenges as they seek peer acceptance and attention in form of likes by participating in them. (Kriegel et al., 2021)

2.3 Parental mediation of children's TikTok use

As the threats of TikTok rose among the research it was clear that most of the authors also wanted to make suggestions for parents. Therefore, I wanted to add a separate section where I present the suggestions and guidelines which previous research present for parents. The suggestions are divided in this section to communication, supporting technologies, education, and children's right. These separate sections formed naturally around the nature of the suggestions made as different researchers suggested different methods to accomplish a safer space for children to enjoy TikTok.

2.3.1 Communication between parent and a child

Active parental mediation is found to be important among parents and teens to maintain a healthy family communication. Active engagement and emotional state are highly correlated with communication between parents and children about online safety. (Rutkowski et al.,2021) Parents need to discuss with their children e.g., about the TikTok challenges which can be harmful to them and make sure that the challenges are safe if children are participating (Kriegel et al.,2021). Harriger et al. (2022) also underline the importance to discuss with children the negative effects which arise from social media use, and not just merely about the actual social media platform and how it works (Harriger et al.,2022). Pedrouzo & Krynski (2023) have recommendations for parents that support safe TikTok use, and these are also something which could and maybe should be discussed with children. The list of recommendations includes avoiding social media use before the age of 13 years, helping children to set the privacy and security settings and limiting children's access to information and images to users closest to the child. Also, children should be helped to develop a critical opinion towards the information received

due to misleading advertising and avoiding exposure to cyberbullying and inappropriate content. (Pedrouzo & Krynski, 2023)

What comes to communication – non-verbal communication also has its place in parent-child communication when it comes to guiding children on social media use. Harriger et al. (2022) find that modelling a healthy relationship with social media to their children is recommended. This behavior includes e.g., following body positive content, not following content which idealizes sociocultural appearance ideals and limiting screentime spent on internet content or social media. (Harriger et al., 2022) After the first step of modelling a healthy social media use is done it once again comes to verbal communication. Communicating about unrealistic images that are seen on social media, algorithms that aim at keeping users engaged for a longer period and tools that are used to make the content online edited are important topics to cover before children make their own social media accounts. (Harriger et al.,2022)

2.3.2 Supporting technologies

Parents are recommended to explore the options on setting up controls for their mobile devices such as Google Family Link which allows monitoring activity, apps and setting up time limits on top of other features. Activating TikTok's parental controls is also recommended. With parental controls the parent is capable of opening an account to TikTok and link it with the children's account through the family safety mode. Family safety mode gives different possibilities for parents, e.g., setting time limit for use per day that can only be undone with a code that an adult holds. (Pedrouzo & Krynski, 2023) Technologies which aim to support active mediation for family communication about online safety between children and parent are vital (Rutkowski et al.,2021). Harriger et al. (2022) recommended to use contracts with children that state the regulation and rules associated with social media usage and on top of this the consequences that come when the child is not compliant with the contract. (Harriger et al.,2022)

2.3.3 Education

TikTok can have dangerous influences on children and parents are often unaware of these (Logrieco et al., 2021). For parents it is critical to make sure that they keep up and educate themselves about TikTok and its various features as more and more daily activities have moved online among children. (Krieger et al., 2021) What comes to parents' role on the cyberbullying happening on TikTok, Vaterlaus & Winter (2021) underline the importance of being aware of how the bullying happens specifically on TikTok to further teach and intervene when necessary. Parents need to monitor and guide their children to manage their profiles on TikTok to support the privacy and control who can comment on the videos posted on the children's profile. (Vaterlaus & Winter, 2021) On top of these parents need to monitor the challenges that children are participating in TikTok and possibly monitor screentime to minimize addiction. (Kriegel et al., 2021) Also teaching children about the digital footprint that is left on social media is important as it forms their digital identity and is permanent and public. On top of this giving tools, support, and education to protect children from the risks of TikTok is needed. Identifying the risky situations can help with blocking and reporting malicious users or asking guidance from adult. (Kriegel et al.,2021)

One thing parents also need to educate themselves on is healthy social media use. Mao (2022) sees that parental monitoring and online navigation can be helpful tools for parents to control possible cyberbullying. Yet unawareness and inattentiveness may be the biggest obstacles for parents to intervene against cyberbullying. Therefore, taking time to

investigate children's online use and making social media features and platform familiar to themselves can help to prevent cyberbullying. It is vital for parents who are unfamiliar with social medias and their use to investigate the confusing platforms. (Mao, 2022)

2.3.4 Sharenting and children's right to privacy

On aspect to the harms which influence children online and on platforms like TikTok is parents sharing also known as *sharenting*, yet this is something which is not discussed a lot among the literature or even media. Sharenting is seen as a behavior of parents when they post videos, stories, and photos of their children usually without the child's consent (Amon et al., 2022) Moser et al. (2017) share that children feel like their parents should ask for permission to post about them before they do, more regularly than parents think they should. But parents also reported that they think that they ask permission from their children less often than they think they should. (Moser et al., 2017) This is without a doubt one aspect which communication can have an enormous impact. Even as children respect posts shared about them which support a positive online identity or image, children have opinion about negative posts. Children do not see it as okay if parents share posts that affect them negatively. Negative posts are seen as something embarrassing and in generic terms: "baby pictures", "anything embarrassing" or material that is visually unflattering e.g., pictures taken when the child has not had the opportunity to fix their hair or make up. Another important theme around the content children prefer that parents would not share about them is information that is too visually revealing such as photos taken where the child has only swim wear on. On top of visually negative posts children show concerns around posts that are too personal and overly intrusive, like post about their relationships or friends. (Moser et al., 2017, pp.5224) Amon et al. (2022) made an interesting and yet somewhat alarming finding in their study. 493 parents were participating in the study, and they found that parents did not see a big difference between sharing general content on social media and sharing about their children, also known as sharenting. Therefore, parents may not see the unique risks of sharing about their children online. One underlying reason why parents shared post about their children was the fear of missing out and the desire to engage in a social network. There is a general disconnection between what parent considered risky and what privacy research suggest is risky behavior. (Pedrouzo & Krynski, 2023) Research like this raises questions about children's right for their privacy, who, what, when and where should post about children be made?

3. Methodology

This section of the thesis is going through the methodology used in my research. I am first explaining the qualitative research approach and then moving on to the data gathering methods: literature review and interview. After these I am discussing the sample group used and lastly the data analysis process is presented.

3.1 Qualitative research approach

Two main streams of research can be identified from the academic field: quantitative and qualitative research, the latter being the one used in this thesis. Berglund et al. (2006) state the fact that when discussing research among education the distinction between qualitative and quantitative research is to be highlighted. Meanwhile Hennik et al. (2020) discuss the differences of qualitative and quantitative research from the underlying assumptions point of view. Concepts from the interpretive paradigm are guiding qualitative research and assumption inherent in the positive paradigm are guiding quantitative research (Hennik et al., 2020). Quantitative research is basing on the assumption that truth is neutral and objective, and hence answers to technology and science this way. Meanwhile qualitative research pushes this assumption in multiple ways by arguing the impossibility of objective truth existing. (Berglund et al., 2006) Hennik et al. (2020, pp.16) gather the differences between these two main streams of research as seen on the table 1 below.

Table 1. Differences between qualitative and quantitative research (Hennik et al., 2020)

	Qualitative research	Quantitative research		
Objective	To get contextualized understanding of behaviours, beliefs, motivation	To quantify data and extrapolate results to wider population		
Goal	To understand how? Why? What is the process? What is the context or influences?	To count, quantify, measure a problem. To answer: How often? How much? What proportion? Which variables are correlated?		
Data	Words (called textual data)	Numbers (called statistical data)		
Study population	Small amount of participants; purposively selected (non-probability sampling) Referred to as interviewees or participants	Large sample size of representative cases. Referred to as subjects or respondents		
Data collection methods	Observation, group discussions, in depth interviews	Opinion polls, exit interviews, population surveys		

Qualitative research is not easy to define as it is an umbrella term for several techniques and philosophies. Broadly, by using selected set of research methods i.e., semi-structured interview or observation researcher is capable to examine people's experiences in detail. (Hennik et al., 2020) Hennik et al. (2020) point out that qualitative research is more than its methods. What makes qualitative research distinctive is the approach used, it allows to shift weight to the perspective of the study's participants and comprehend the interpretations and meanings participants give to events, objects, or experience. (Hennik et al., 2020) Berglund et al. (2006) add to this as they mention the researcher's experience becoming one with the research outcome as a particular author brings his/her personal

experience into the research setting. This results the researcher obtaining - into some extent - a different insight than other researchers would (Berglund et al., 2006 pp. 8) The idea that meaning is socially constructed by individuals in interaction with their world is the key for understanding qualitative research. Reality or world is not something that is single, fixed, measurable, or agreed upon phenomena like in quantitative research. Rather there are several interpretations and structures of reality which are constantly changing over time. (Merriam, 2002)

Both research types have their place in academia, but qualitative research is the one I chose in the light of my research topic; its focus being on the social phenomena around a social media platform from the perspective of selected user group. While I was forming my research questions I decided on qualitative research. On top of this the amount of research done around TikTok is limited and therefore I am aiming at understanding the phenomena around TikTok better by using qualitative research.

3.2 Initial literature review

The base of all research comes from literature review in one form or another. As stated in Snyder (2019) the building block of every academic activity, whether the discipline, is building the research on and relating it to the existing knowledge (Snyder, 2019). Webster & Watson (2002) support this highlighting that literature review is an essentiality of any academic project (Webster & Watson, 2002). But conducting a literature review can be challenging even for experienced researcher (Knopf, 2006). Knopf (2006) defines literature review briefly as summarizing and evaluating a body of text in a clearly defined topic and Snyder (2019) adding that it is more or less a systematic way to synthesize and collect previous research.

Three contexts, in general, where literature reviews are produced are presented in Knopf (2006): a literature review can be a preparation phase in a bigger research project, it can be the end in and of itself and lastly it can be a component of a finished research report (Knopf, 2006). Literature reviews can hold many reasons for research projects and the value of them can depend not only on the topic but also on the author's aim. Three different literature review types can be identified. Systematic reviews have strict requirements and are great in showing what particular articles are supporting a particular research question. This can be harnessed into informing policy and practice. (Snyder, 2019) Yet systematic literature review cannot always serve as the best practice depending on the research and other approaches may bring more value to it. When the research is issuing a broader topic which has been studied in many disciplines and has been conceptualized differently, a semi-structured literature review could be of help. (Snyder, 2019) This thesis also uses semi-structured literature review. Integrative review is the third approach and when used it mixes perspectives to form new theoretical models (Snyder, 2019).

Literature reviews come with many benefits if used properly. They are capable of forming a knowledge development, forming guidelines for practice and policy, give evidence of an effect. Also, when conducted well they have the possibility to form new directions and ideas within a field of discipline which can serve as the ground for future theory and research. (Snyder, 2019) Webster & Watson (2002) line that when a literature review is effective, it builds a solid base for advancing knowledge. It reveals areas where more research is needed, facilitates theory growth and shuts areas where a lot of research already exists. (Webster & Watson, 2002)

Important research questions and themes can be identified from previous research; therefore, literature review has an inevitable part in my research process while conducting my research regarding TikTok and children. Identifying important findings from previous research discussing the topics around children and TikTok but also harmful effects of the use this specific social media platform guided the development of research questions. Hence the research questions which I am aiming at answering were supported and mirrored from a knowledge base I gathered from literature.

While conducting my searches for previous research it was noticeable that the amount of research done involving TikTok and children is rather small and quite new. I had to change my approach regarding the databases I was planning to use to gain knowledge about this area of publications specifically.

ACM Digital Library and Scopus were not giving the amount of results as I was first accepting. Hence, I move to Google Scholar and made the searchers in this search engine. Search phrases used to find fitting sources of information were:

- "(Child* OR Youth OR Young*) AND TikTok" giving 15 900 results in Google Scholar and
- "(Harm* OR Secu* OR Safe*) AND TikTok AND (Child* OR Youth OR Young*)", this phrase gave 7 230 results in the same search engine.
- "(Harm* OR Secu* OR Safe* OR Negati*) AND TikTok AND (Child* OR Youth OR Young* OR Adolesc* OR Teen*)" ended up giving 7 530 results

The amount of hits is large, so I went through the first five pages of hits for each three query. From the results found by Google Scholar I continued the process with a snowball method by gathering literature from the reference lists of articles I found fitting to use in the literature review. As the themes rose from the gathered literature I further continued to search for specific literature with a theme. As an example, I noticed that stranger danger was a common threat identified among research. I modified the search phrase to better fit my need for more literature and used: "TikTok AND Children AND stranger danger" to find more suitable literature for the literature review section. An interesting notion I also found in the literature gathered was that there was little research done around TikTok and addiction. But as addiction was mentioned in the literature but yet not researched, I wanted to make specific searches for it. This was done by implementing a separate search phrase for finding literature discussing TikTok and addiction, the search phrase implemented was: "TikTok AND addiction".

3.3 Empirical data collection

Qualitative interview is a well-known method among researchers from different disciplines. Among qualitative research, the qualitative interview is one of the most important data gathering tool and most popular. It is a powerful research tool for qualitative research and is excellent for gathering data, this tool is also widely used in IS research. (Myers & Newman 2007) Interviews give an in-depth information relating to the specific topic from the interview's participants viewpoint. To obtain thick, rich data utilizing a qualitative investigational perspective, several forms of interview design can be developed. (Turner & Hagstrom-Schmidt, 2022) Structured, unstructured, semi-structured and group interviews are just some of the interviews used in qualitative research (Myers & Newman, 2007). Part of my data gathering method is semi-structured interview.

Semi-structured interview has an incomplete script and therefore there is room for improvisation. Qualitative research done in IS research has used this sort of interview type the most (Mayer & Newman, 2007). The reason for popularity is the way the semi-structured interview is at the same time flexible and versatile. Advantage which is also typically identified with this specific interviewing method is it is capable of opening reciprocity between the participant and the interviewer. (Kallio et al., 2016) Hence regarding the selection I made when choosing the interview approach, I wanted to address some specific topics concerning TikTok and children, keeping the research questions in the centre of the interview. Yet I also wanted to have flexibility around the discussion happening, so I did not see structured interview as a better option as I wanted to truly hear what the parents have to say. While the third option in mind, unstructured interview, may have led the discussion to too wide, not focused, discussions around the themes.

Previous research helped to guide the interview questions by providing themes of discussion. The interview questions covered basic information of the parents and children e.g., age and the amount of social media use. After basic information was gathered the parents were asked about children's use of TikTok and the different ways that TikTok has influenced the children, this covered discussion around e.g., addiction. The parents were also asked about the methods they use to monitor their children's online use e.g., Google Family Link and their opinion about TikTok. The interview questions are in the Appendix B of this thesis.

3.4 Sample selection

In this study the sample group consist of Finnish parents whose children use TikTok. As parents often act as their children's personal moderators when social media is discussed, their opinions and experiences are valued in the context of this thesis. On top of this parents can express their practical knowledge around the topic and they usually carry a lot of worry around children's safety online. All under 18 years old can be seen as children (Unicef, 1989). The interviewed parents' children's ages are from eight to sixteen so the variation in age is quite large. The age variation between the children has the potential to bring out interesting differences between different aged children. As children aged from 7 to 9 can lean more on their parents' guidance around social media and on the other hand children aged from 10 to 12 fall into the category of not being young children neither adolescent, also known as tweens. From the age 13 to 17 children are seen as adolescents and usually this age group is seen to search for their own paths and parents' guidance is not always as welcome as it was in their childhood years.

The criteria for choosing the interview participants were that the parent had a child who uses TikTok. This study includes families with different backgrounds, but all the interviewed parents are their children's primary caretakers. As the interviews were done 1 to 1, only one parent from one family was interviewed. It was not planned but it happened that each of the parent are female. On top of gender the parent age did not have a wide variation (Anonymized). The total amount of children who used TikTok among the participants' children was eight. There was one eight years old, one 10 years old, two 12 years old, three 13 years old and one 16 years old.

The interview participants were gathered using convenience sampling and the snowball method was implemented to gain even more participants in the narrow time window. It should be noted that time constraints had a lot of influence on how the participants were chosen. Robinson (2014) presents convenience sampling proceeding by finding any convenient cases that meet the required criteria and among these selecting the ones who respond on first-come-first-served basis until the needed sample size is reached. One of

the dangers of convenience sampling in qualitative research is that the sample selection is too broad and unwarranted generalisations can be attempted from the convenience sample. (Robinson, 2014) Gladly this danger was minimized as the sample group consist of specific parents, parents whose children use TikTok and most of the parents were from the Oulu area. After the convenience sampling was done by contacting parents and people that I knew that had contacts which include parents and there were no more convenient participants to contact, snowball method was used. To gain even more participants to reach the needed amount of interview participants I asked if the interview participants knew anyone that would fit the sample group criteria. Snowball sampling includes asking interview participants for recommendations about other possible participants that might be able to participate in the interview (Robinson, 2014). All of the interview participants were first contacted via text message and after that the Microsoft Teams meeting request and research permit was sent to the participants email address. The permit sent to the participants for the interview can be found in the appendix A.

Due to time constrains and to enhance the time management of both the interviewees and interviewer, all of the interviews were held online using Microsoft Teams while using the software's recording feature to collect a recording of the interview. To make a transcription and report the finding from the interview, the audio of the records was used. Each interview lasted around 30 to 40 minutes. The interviews were held in Finnish and the quotes have been translated to English.

3.5 Data analysis

Qualitative research with its various approaches for the analysis and collection of data aims at providing detailed description and an in-depth socio-contextual interpretation of the topic of the research. It covers a wide range of approaches with a broad variation in concepts, analytical rules, and assumption. Yet even if there is variation all qualitative methodologies contribute to interpretation and description of developing, complex phenomena, and reforming understanding rather than only verifying earlier theories and conclusions. (Vaismoradi et al.,2016) As I started to search for the most suitable data analysis method to use to analyse the interview data – I found thematic analysis. Braun & Clarke (2006) say that for qualitative analysis thematic analysis should be perceived as a foundational method. For researcher thematic analysis should be the first qualitative method of analysis to learn as it gives the core skills which will be handy for conducting other forms of qualitative analysis. (Braun & Clark, 2006)

Thematic analysis gives a flexible and useful research tool that can potentially enable a detailed and rich but still complex account of data due to its theoretical freedom. Thematic analysis can be described as a method for analysing, identifying, and reporting patterns within data. These patterns are also called themes. (Braun & Clark, 2006) Vaismoradi et al. (2016) identify that the main strength point of thematic analysis is the addition of creativity and the collaboration of researchers' subjectivity in the separate steps of theme development. Maintaining creativity is allowed while preserving principles of data analysis. (Vaismoradi et al.,2016) Hence I felt that thematic analysis is the best fit for my data analysis process and chose it among other methods. Braun & Clark (2006) present the phases of thematic analysis, these phases are presented in the Figure 1 below.

Table 2. Phases of thematic analysis (Braun & Clark, 2006)

Phase	Description of the process				
1. Familiarizing yourself with data:	Transcribing data, reading and re-reading the data, noting down initial ideas.				
2. Making initial codes:	In a systematic fashion, coding interesting features of the data across the whole data set, collating data relevant to each code.				
3. Searching for themes:	Collating codes into possible themes, gathering all data relevant to each possible theme.				
4. Reviewing themes:	Checking if the themes work in relation to the coded extracts and the entire data set, making a thematic map of the analysis.				
5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme and the overall story the analysis tells, generating clear names and definitions for each theme.				
6. Producing the report:	The last opportunity for analysis. Selection of compelling, vivid extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.				

By first familiarizing myself with the literature review data I was able to make initial codes and search for the themes e.g., stranger danger. As the interview questions were categorized into themes already it was fairly natural to theme them for analysis. The research questions guided the themes for the interviews and therefore the themes around the interview questions were the threats and negative effect TikTok can have on children and the role that a parent has on these effects. After analysing the interview data and reporting the results I continued to compare the findings made in previous research with the interview data. Some of the interview questions were answered with vulnerable information and hence some of the quotes and details seen in the findings section are anonymized and marked as: (Anonymized).

3.6 Validity and reliability

While collecting data both from previous research and from the interviews I continuously kept in mind the research questions set for this thesis. I did my best to find relating literature that supports and opens up the research topic. By reporting the data collection process for previous research in detail, I aimed at making it possible to others to conduct the searchers with same results. I designed the interview questions with the support of the previous literature and gathered qualitative interview results which I tried to analyse and code the best I can by implementing thematic analysis. I wanted to present the participants answers with the appreciation they need, as clearly as possible while still making sure possible vulnerable information is not revealed. Yet, as the data collection was done with a qualitative interview there is always a change that the results can differ between interviewers.

4. Findings

This chapter presents the main empirical findings of the interviews. These findings present the views and experiences of the parents who participated on the interview. The findings are divided into smaller subsections based on the interview themes. The themes were formed around the research questions:

- 1. What kind of threats to children's safety in TikTok are Finnish parents concerned about?
- 2. What is the role of parents in addressing the possible threats?

The first section covers the parents' social media use while the second section highlights parents' views on TikTok safety and other supporting technologies used to online safety. These sections open up the second research question. The third section is formed around the children's TikTok use. Fourth subsection focuses on the possible threats and negative effects of TikTok. These sections are guiding the answer to the first research question. Lastly parents' views around TikTok are shared with added recommendations from the parents to third parties who guide the children to be safe online.

4.1 Parents social media use and view on sharenting

Each of the interviewed parents used social media daily, were familiar with multiple different platforms, used TikTok themselves in one form or another and used internet in work related tasks either fully or just to get new ideas. What comes to the amount of social media use, some variations were noticeable between the parents. All of the parent used Instagram, Facebook and TikTok, V5 also used Twitter and LinkedIn and V4 added Snapchat to the list. While the amount of social media use was higher in the case of V2 and V3 (4 hours and 5-6 hours) V1, V4 and V5 mentioned the usage to 2 hours (V4) and 1,5 hours on average (V1 & V5). It should also be mentioned that while V2 and V3 reported to use a lot of social media daily, they seemed to notice it too.

V2:" I am very active, as I am an influencer"

V3: "I am a social media overconsumptioner"

V2 worked in managerial job and mentioned that most of the tools used in the work are online, ranging from customer information systems to payroll software. On top of this usage in work related tasks, she mentioned being an influencer herself. She stated to be very active online, and the social media usage is reported to be about 4 hours a day. Platforms she used and made content into were Instagram, TikTok and Facebook. When asked if the interviewee thought she uses social media both safely and effectively she answered quite directly and with an experience which has happened previously.

"Yeah, I would like to believe and hope that I do. Nowadays I give it more attention. (To use social media safely and effectively) As I have had a harassing experience before when I was asked questions such as, where I am and therefore, I do not post content in real time anymore" (V2)

Also, as V3 worked as a marketing chief and summed up the questions around internet use and social media use in work related tasks as: "One hundred percent!". V3 also used Instagram, Facebook and TikTok but published content only into Instagram and the TikTok usage was focusing mainly on viewing content. The amount of time spent on

social media was from 5 to 6 hours per day. When discussed about the safety and effectiveness consideration, she put It simply and stated: "I believe so" (V3)

Hoping was a theme which rose from the question asked if the parent thinks she uses social media both safely and effectively in the case of parent V1 and V2. But also, some uncertainty was identified. Almost identically how V2 stated she hopes and believes so, V1 stated the same, but added that she is not 100 percent sure.

"I believe and hope so ... I am not 100 percent sure for example how safe certain platforms are and what safety features are enabled in the settings" (V1)

While this uncertainty was noticed by V1, V4 and V5 felt the same. V4 kept the answer short and V5 had the same tone in her answer.

"Well ... there is always information security risks with everything ... I'm not sure" (V4)

"Well ... I am not sure, what comes to matters of children I am pretty strict, but difficult to say" (V5)

While asked if the parent shared content about their children online to the platforms most of the parents except V2, answered quite simply by stating just: "yes". V2 shared content regularly she also shared content about her children in Instagram stories but mentioned that the amount and type of shared content about children had changed as questions around safety have arisen. Also, all of the interviewees said to share content about their children online. V5 however later added to the answer and mentioned that she asked permission from the children before sharing.

"I always ask permission ... but maybe to the Instagram stories I might add content with a bit of a lower hesitation".

All parents made content to Instagram. The content shared about children were on Instagram either in form of posts or stories. V4 said to have linked her Instagram account to Facebook and hence the content shared on Instagram went to Facebook too. When parents were asked about what they thought about sharenting the replies varied. V3 kept it short by saying: "Neutral opinion" and so did V1 by answering: "Why not?"

V5 explained a bit further:

"Well, I actually don't have an opinion, it is a part of the current time. As long as if children mention that they do not want it to be shared their opinion should be appreciated" (V5)

V2 and V4 also elaborated a bit more:

"It's a mixed blessing, I myself would not like to be the child. In a child's life, years play a huge role. Before starting school content about the child is shared and after starting school you (the child) are suddenly known. It could be something that (sharenting) that bullying is concentrated on. Not as continuous content (post about children), of course sharing stories is ok" (V2)

"Well of course there is a lot of small children who do not have any say on the matter. I accept it that content about children is shared without publishing the child's identity, by

sharing pictures without showing the face, until the child is 12 years old and can be asked a permission" (V4)

After discussing sharenting parents were asked if they themselves followed sharenting accounts. V4 mentioned that in the past she had been following account like this but not anymore. V2 currently followed a sharenting account, and continued:

"... sometimes I am horrified that is there nothing else to share rather than content about children. I think that until the first negative contact or threat arrives (to the sharenting accounts owner) involving the family, it will continue. "(V2)

4.2 Parents on TikTok safety and use of supporting technologies

While each parent had used TikTok, none of the parents had used the safety features provided by TikTok which are Family Safety Mode and/or Family pairing. When asked why these features have not been used, all said that they did not know that these features existed at all. Overall, all sounded surprised about the features and what they include. V5 opened up the reasoning behind why these features were not used a bit more than the others:

"No, okay, nice to know. I have not heard that there are features like this. One reason is that I did not know, the second reason is that I trust the (TikTok) algorithm to not show harmful content and the third reason is that I trust my children. We have a very communicative relationship, and we discuss a lot about a lot of topics and I trust that they tell me if they have stumbled upon harmful content and that they do not go and search for something stupid (content) by themselves". (V5)

V2 shared that she has not known these features exist but also that she has read about them before the interview:

"I did not know that these existed. Actually, after you talked about the interview I went online and made searches about TikTok and I stumbled upon these and that you can create these. So not knowing is the reason". (V2)

V4 was also clearly interested in the subject and mentioned that the features are going to go on her task list to make more sense of them as TikTok is still something new for her.

"No, I actually started to look (TikTok content) - and even now pretty rarely -a year ago or so ... I am not that active on it ... I need to get familiar with this (TikTok's safety features)". (V4)

Even if the TikTok's own supporting features for safety were not familiar to the parents, other safety measures are or have been used among all of the parents. Also, every parent has had discussions with their children about possible threats involved around TikTok and other social media platforms.

V1 reported to have screen time in use for her youngest child, but he is out of context in this case as he is not using TikTok. The middle child of the parent has limitations around the phone during night-time.

"He hands over the phone at night before going to bed and brings it to us" (V1)

Therefore, the oldest child did not have restrictions in use. On top of these V1 did not mention about any other safety software or applications which would have been in use.

As V1 had implemented the phone ban for night-time, V2 also mentioned about manual safety measures that take place in the children's lives. V2 listed children having time out space for the phones, no phone use during mealtimes, specific game day when the children are allowed to play online, and a phone ban two hours before bedtime. On top of the manual safety measures V2 shared about a supporting technology which is used.

"... we have an app which follows the phone use. We have a great trust relationship between children so if it is going well in the school and they behave, we will deactivate the application. So, in a way it (the safety application) is a penalty ..." (V2)

Rest of the parents were all familiar with Google Family link software. Two of the parents (V4 and V5) used it and one (V3) had been using it previously. V4 informed that the Google Family Links had been in use previously before the daughter changed to a new device, but the software was not in use at the time of the interview. V5 used Google Family Link as a way to regulate dangers by banning certain adult content sites. And at the same time both children were encouraged to self-regulate themselves through discussion. V5 mentioned more about this in the end of the discussion when opinions around TikTok were asked. V4 used Google Family Link more broadly. Google Family link restricted the daughter in the means of downloadable applications and occasionally banned the phone use aside from making phone calls. After asking about how the children take these restrictions, V4 continued to tell more about how the restrictions were welcomed to the children's life.

"It (Google Family Link) has been in use since the day she started to use a phone. Now fewer restrictions are implemented and if used then it is quite a quarrel, and she knows some passwords and goes secretly to the content". (V4)

V1 and V2 also told about how the children reacted towards the used safety measures. The answers where quite straight forward.

"We have discussed about the safety measures, and they (children) are aware of and also many of their friends have certain restrictions. The reactions were good" (V2)

"We have not discussed the safety measures specifically, but we have agreed upon the rules and that's that". (V1)

As mentioned before, all of the parents have had discussion with their children about possible threats around social media and TikTok. V3 reported having these discussions for years now, ever since the phone usage started, and added that the children were advised to tell the parents immediately if someone approaches them. On top of this V2 regularly asked the younger child if she had faced anything scary on TikTok. The amount of discussion happening was also underlined by V5.

"Yes, we discuss about these and for sure we could discuss even more. Highlighted is, that no relationships are formed on social media. Not all people are what they say they are" (V5)

In the case on V1 it came to my knowledge that the middle child's high school approached the parents directly via messages notifying about possible harmful content that spread on

TikTok. This sort of approach was not mentioned among other interviewed parents. The fact that V1 was from a different Finnish province than the other parents and that the other sons of V1 schools did not use this method might explain that these differences are school related. V1 went ahead and explained about the discussion happening with the sons.

"The discussions happens if the school notifies that there has been harmful content moving around. And overall discussion has happened that not everything can be trusted what is seen on TikTok" (V1)

4.3 Parents views on children's TikTok use and its effects

All of the children used TikTok mostly with a mobile phone and all of the children had an account on TikTok except for the 8 years old girl who used TikTok on her mother's account with permission. The 10 years old girl uses only phone as does the 13 years old girl. On top of phones 13 years old boys had a tablet and in use, while one of them used also a computer as did the 16 years old boy. 12 years old girls had both tablets and phones in use.

When asked about how the children use TikTok, the answers varied between parents. I gave supporting questions to parents while asking this as TikTok has many features and is not only about watching the short videos. The supporting questions included commenting, liking, direct messaging, and content creation. One similarity between all of the answers was that all of the children gave likes on TikTok.

V5 mentioned that her younger daughter used the TikTok filters to make content into her own use by downloading the videos to her own device, but she did not publish them on TikTok. Three parents informed that their children made content on TikTok themselves, while one parent said that her child used to make and publish content on TikTok but stopped.

"(Anonymized) used to make videos ... but had so much negative experiences around it the created content that it ended and TikTok was deleted from the phone for half a year" (Anonymized)

What comes to commenting on TikTok, V1 reported that her sons commented on posts, similarly did V2 regarding her son and V4 regarding her daughter. V5 reported that her children did not comment and neither did the daughter of V2, while the parent thought her daughter was not yet capable of commenting. V3 on the other hand was not sure whether her daughter commented on content or not but believes she did not.

When direct messaging feature was covered, V2 said her son did use the direct messaging feature and so did the daughter of V4. V1 and V3 did not know whether their children used direct messaging feature or not. The daughter of V2 and the children of V5 did not use the direct messaging feature.

After moving into the questions around time, locations, and motivations behind TikTok use, it was noticeable that the parents' answers were quite similar. Therefore, the table 3 seen above effectively sums up the findings made regarding these questions.

Table 3. Basic information about the children's method of use around TikTok

Childs age	8	10	12	12	13	13	13	16
How long have the children used TikTok? (years)	2	3	3	3	5	2	2	2
How long does the child use TikTok daily? (years)	2	1	4	1,5	3-4	2	4	4
Where does the child use TikTok? (Home/Outside home)	Both	Home	Both	Hom e	Both	Both	Both	Both
Does the child have a private account?		Yes	Yes	Yes	No	Yes	No	Yes
What is the motivation behind why child started to use TikTok?	Dances	Friend s	Friends	Frien ds	Friends	Pressure	Friend s	Friend s
Does the child use direct messaging feature?	No	No	NI	No	Yes	Yes	NI	NI
Does the child comment videos?	No	No	NI	No	Yes	Yes	Yes	Yes
Does the child give likes on videos?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Does the child make content on TikTok?	No	No	No	No	Yes	No	Yes	No
Why the child still uses TikTok?	Addicti on, Entertai nment, Trends	Fun, Entert ainme nt	Fun, Entertain ment	Hob by	Fun, Entertain ment, Trends	Addiction , Entertain ment, Trends	Addict ion	Addict ion

Yet some findings need to be highlighted, V3 reported that the child had used TikTok around three years, but she had been banned several times from the platform due to her being underaged. Therefore, the time period might be a bit smaller in reality. Also, V5 mentioned that her youngest was deleting and downloading the TikTok application from her phone.

"She has herself deleted (the application) (pause...) as she has noticed that too much time is spent on it. She is quite self-reflecting...when she uses the application it might take around 2 hours in a day" (V5)

Yet the use was not daily so V5 rounded the number to one hour per day. V3 estimated use to around four hours but added that on the weekends the amount of use was greater than that. V1 summed up the daily use also to four hours daily after stating that the children spent all of their free time at home on their phones. And almost every time V1 checked what the children were doing on their phones – they were on TikTok.

Hence the amount of time spent on TikTok can be difficult to calculate for some parents when taken into consideration the places where children use TikTok as all parent except V5 reported that children used TikTok also outside of their home environment.

V1, V3, V4 and V5 named the children's friends to be the possible motivator why the children started to use TikTok in the first place. But V3 added that her child had "followed the trend" (V3) reflecting on the fact that being on TikTok was trendy. V2 on the other hand did not mention friends in the answer, but instead in the case of the son the motivation came from overall pressure and the fact that TikTok was popular; and daughter's motivation came from wanting to learn the dances presented on the platform.

The reasoning behind the factors why the children want to still use TikTok varied. V1 mentioned addiction and a method to pass time. While V2 also mentioned the latter, she added entertainment and the need to keep on track the present-day content. This might lean towards current viral content. V3, V4, and V5 in regards of her youngest, mentioned the motivator being fun and entertainment, but V4 added the need to stay on top of trends. The motivation why V5 oldest was continuing to use TikTok was based upon her hobby. She found the best art and drawing tips from TikTok. V5 considered the motivation deeper regarding her youngest.

"Humour, she is in the age of when she is not playing anymore, or the plays have changed. It is (using TikTok filters) something to do together and it is social." (V5)

The last questions to cover the children's TikTok use involved other TikTok users. I asked whether the parent knew the users that the children were in contact with on the platform. This included everyone from creators that the children followed to creators whose videos the children's commented and gave likes to and who followed the children's account and with whom the children messaged on TikTok in the direct messages. An interesting finding was made when this was asked. Only one parent knew.

Daughter of V2 used TikTok on her mother's device so she knew the interaction that happened on her device. The son of V2 followed Finnish and foreign creators that made content around gaming, and he interacts with his friends.

V1, V3, V4 and V5 all stated: "I do not know".

At the same time V5 mentioned previously that while discussing about safe social media and TikTok use they had discussed about the importance to not make new relationships online because everyone is not as they seem online. Regarding the same question V2 was underlining the fact that the children needed to say if someone contacted them online, but at the same time V2 knows who the children are in contact with.

4.3.1 Changes in children's behavior

All parents had noticed changes in their children's behaviour which they linked with TikTok use. V5 first answered no but later on added that her youngest children had been dancing more dances which were popular on TikTok. She did not find any changes regarding her oldest. Other parents instead found wide range of changes in their children's behaviour that they linked with TikTok use. V4 said that the screen time had increased but was not able to determine whether it was the because of TikTok or something else. She mentioned other changes in her daughter's behaviour she could link to TikTok use.

"Fashion is something that is currently interesting, she must have the exact clothing, expensive brand clothing. Decorating her room, and it needs to be just the same (as she has seen on TikTok) and every kind of dance, and a lot of dances are copied (from TikTok). She has also started dancing and sometimes she tries new recipes. At one point she wanted to be a vegetarian, but she is a picky eater so it did not continue even though we said that we could make more vegetarian food at home." (V4)

Dancing was also mentioned by V3 as it was from V5, V4 and V2. But none of the boys were reported to have been interested in dancing. When asked if the daughter of V3 has had any changes happened to her behaviour after starting to use TikTok she answered a longer list:

"Oh a lot! TikTok's effects on my children are seen widely. In the way she dresses, the way she does makeup, the way she eats, and she is also interested in routines like night-time routines and such. She also wants to take cute pictures about her food and eat healthy, like fruits ... also, morning routines has been implemented in her life and she likes to do face masks and take care of her skin" (V3)

V2 kept her answer short and stated that all the mentioned changes have happened that were mentioned in the follow-up questions: more screen time, new hobbies, new diet, or changes in their looks. She went ahead and stated that from these, addiction is something which they have discussed about. V1 also lists a few things.

"More screentime and the way they dress, for example specific shoes are something they needed to have." (V1)

V1 added that her middle child has also started to be interested in bodybuilding and that both children felt like they want to be like everybody else by the way they followed trends and the way others dress.

All except V5 found that TikTok marketing and recommendations from influencers on TikTok had influenced these changes. V1 also added that for example Christmas presents were straight from the TikTok recommendations. V2 highlighted marketing and influencers on TikTok played a huge role and V4 specified that the makeup her daughter used were from TikTok recommendations. V5 was the only one who did not see it influencing but rather friends.

4.4 Parents views on the threats and negative effects of TikTok

4.4.1 Hate speech

Every parent believed their children have seen hate speech on TikTok. V1 was certain that her children have seen hate speech but was not able to remember a specific video. V2 said that her son has seen racist videos but was unable to remember what video it was specifically. V3 and V4 mention racist content too.

"I cannot remember one video, but I remember when the black lives matter movement was on surface, and we discussed it as she was worried whether she would also be in a victim (of hate speech) and should she also fear it. But the use of TikTok did not change" (V3)

"She has talked about seeing oppression and racism towards dark-skinned people ... there has been several videos. She felt sad and feared if something like that would happen to her also. Some sort of guarding instinct was woken in her. The effects of the videos were seen in the way she did not publish content on TikTok in a year" (V4)

V5 brings up hate speech her oldest daughter has witnessed regarding sexual minorities:

"She has mentioned that there are all sorts of idiots on the platform who do not approve homosexuals. She is very thoughtful and as we have spoken about the issue, she has managed to compartmentalize it as hate speech ... she has taken is quite maturely. I do not know how it goes when she realizes how unequal the world is." (V5)

The use of TikTok did not change after seeing these sorts of videos according to V5. One parent also mentioned that there was hate speech regarding her child's content (Anonymized)

4.4.2 Eating disorders

Four children have had discussion about eating disorders with their parents. (Anonymized) had spoken about eating disorders with her child:

"It has been emphasized how important it is to maintain positive body image for girls" (Anonymized)

The discussion involved the child's partner, hence it was not directed to her sons directly. (Anonymized) mentions the motivation:

"(Anonymized) constantly feels pressure about the mirror reflection. (Anonymized) daily picks out the clothing ... mentioning sometimes "Look how rowdy my stomach is" and sometimes even says how (Anonymized) is not able to eat burgers for dinner or it will show in her stomach" (Anonymized)

(Anonymized) expressed how bad this feels as she herself always has promoted positive body image on all sizes. Three parents had not talked about eating disorders with their children.

"No, we have not, there has not been a situation where I would have seen that my children are observing their bodies" (Anonymized)

(Anonymized) shared that her child had battled with huge weight loss to a point where the schools nurse was involved to speak about positive body image.

4.4.3 Sexualization

V1 had talked about sexualization with her children:

"Yes, we have. A video had spread around where sexual content was shown. We discussed that what they have seen is something that is between two people and should be private and that everything that is seen is not normal" (V1)

V1 did not open about what kind of feeling this brought to surface. V2 also mentioned that they have had a talk about the issue:

"My daughter has been influenced ... she has been wanting to start pole dancing ... we have discussed about sexuality "(V2)

V4 has had discussions around sexualization:

"... The child reacted very understandingly. When she was younger it was a scary thing and now when she is older, she has managed to understand it better. I do not know if she has any experiences around it" (V4)

V3 mentioned that they had not yet seen discussing the matter timely. While V5 had not talked about sexualization but notes its importance:

"No but that is actually something that we could have more discussion about. They are beginning to be in the age where the matter comes topical. We have talked about sexuality but not about sexualization in the context of TikTok" (V5)

4.4.4 Challenge videos

None of the parents reported that their children having had any physical harm from TikTok use. None of the parent saw this as a possibility in the future either, but V3 said that one can never be one hundred per cent sure. V2 mentioned that one of her sons' classmates had been injured in the past because of a challenge video on TikTok. Hence, she had discussed the situation with him, and the school was involved in the discussion around the incident. V2 also thinks that the number of challenge videos on TikTok had decreased.

V3 added that her daughter was more of a supporter for the *clean girl aesthetic* and was not the type to do challenges or other stupid things. Clean girl aesthetic is a term that referes to a beauty, fashion, and lifestyle trends based around the look that is intended to appear minimalist and effortless but also elegantly casual (Dictionary.com) The daughter was only searching for beautiful content from TikTok, and this was hence not a threat that she saw possible happening in the future. V4 did not either see it possible but mentioned that her daughter has involved in some 24 hours challenges a few years previously when her daughter was sleeping outside for a whole day. V5 did not either see that her daughters fitted the target group of challenge takers.

4.4.5 Harmful content

All except V5 said that the children must have seen content related to for example, violence, bullying, false information, or substance use on TikTok. Regarding his oldest

son V1 said that he must have seen this sort of content on TikTok and regarding her middle child she mentioned that she needed to constantly correct him about false information. V2 and V3 summed it as follows.

"Definitely all of these. Most definitely it has caused fear, a lot of questions and confusion" (V2)

"... you cannot avoid it" (V3)

V3 added that they had not discussed about it with her daughter. Yet she was sure that her daughter had seen these. V4 was able to give an example of one of these experiences.

"Yes, she has, I believe that all these different kinds of videos. A naked man's genitalia were in one video and the girls were laughing so I noticed it. I was very concerned and worried as they just laughed. I noticed that I need to talk about these things more because the children do not know about them. They are so gullible as they are children." (V4)

V4 also said that the use changed in a way that she started to monitor the use more of TikTok. V5 was the only one who believed that her daughters had not seen harmful content on TikTok.

"I do not believe so, I think they would have shown distress and I would have noticed and asked about it. We constantly monitor and observe the children that are they ok. It is possible that that sort of content comes to surface in the future ... gets lost in the wrong place and the algorithm pushes same type of content to them" (V5)

4.4.6 Unpleasant feelings

Only V2 reported that her child has told her they have had unpleasant feelings because of the content seen on TikTok, however all felt like it could be possible in the future. V2 explains her daughter had seen a video with animal cruelty which had made her upset and sad. Also, the same child had seen men's genitalia on TikTok, which made her feel confused.

V1 saw that it was likely her children face these kinds of feelings in the future especially as they start to compare themselves to others and their self-confidence decreases. Also, there is a lot of pressure in the bodybuilding community on TikTok which she saw likely to affect her middle child.

V3 said that as her daughter is getting closer to teenage years her mood is shifting more regularly. V3 believed the algorithm on TikTok will feed those mood swings as these changes start.

V4 was also certain that her child was going to face unpleasant content on TikTok. Her response was close to V3s as she mentioned that as her daughter grows the more followers she will get as the content she publishes on TikTok increase. She thinks that the child might not be able to even imagine the comments and perceptions given by older viewers can give as the daughter grows. There is a possibility for hate comment and such but V4 underlined that she feared for older men approaching as V4 had a daughter after all. V5 saw that it was possible to see harmful content on TikTok because the content varies so much.

"There is all sort of people who suffer from cancer in the late stages of it and war content, so if harmful content is seen it must bring distressing feeling on surface. And on social media it is so easy to hide behind anonymity and shout out hate comments." (V5)

V5 also highlighted that she supported the children to see that what is seen on social media is not always real world and that there is something else to life too.

4.4.7 Stranger danger

All parents but V5 were able to say that there had been contacts made by stranger to their children on TikTok. V1 was sure her middle child has had contacts from strangers as he made content for TikTok, but she did not make comments on the type of contacts. She did not comment strangers contacting her oldest son. V2 reported her son has had strangers contacting him. She also said that her daughter has had strange men immediately contacting her, before the daughters TikTok was deleted. Same kind of experience was shared by V3

"When she first downloaded and started using TikTok I noticed that based on the pictures, older men, were sending messages like: "You are cute" to her. This was before I changed the account to private and I changed it immediately to private after this incident. But after this I do not know whether there have been any contact attempts by strangers in the direct messages." (V3)

V4 only underlined positive contact attempts by strangers:

"Same aged girl approached her on TikTok, and they became friends and have seen themselves in the city. Also, on Easter we were at a local hotel and there one girl recognised her and they hang out that weekend together at the hotels gym"

V5 did not know whether her daughters had received contact attempt by strangers but an incident including stranger had happened on another platform. On YouTube a young mentally disabled man sent the older daughter messages where he asked the girl to undress herself and send him pictures. V5 was unsure what sort of angst this experience has left. V5 mentioned that they have had discussion around this and tried to explain that the man was mentally disabled.

"These risks truly exists" (V5)

4.4.8 Cyberbullying

Two parents said that they did not know if their children had witnessed cyberbullying, bullied, or been bullied on TikTok. V5 stated that the daughter had most definitively not. V4 did mention that the daughter had not mentioned about anything to her but when I previously asked question about hate speech, she answered differently. V4 said that her daughter had seen that her friend had been bullied. She did not discuss about hate speech regarding her daughter friend but highlighted bullying. When asked about bullying specifically she mentioned that the reporting that happened to her daughter can be seen as cyberbullying. Her daughter was underaged for TikTok and someone continuously reported her account which lead to a situation where she loosed all her followers, videos, and other content. One parent shared that her child has been bullied on TikTok.

"The child has experienced bullying when (Anonymized) made content on TikTok" (Anonymized)

4.4.9 Anti-privacy advice

None of the parent knew what anti-privacy advice meant, however after I gave an example V2 mentioned that she was familiar with them and had tried them herself. V2 thought that the children would not be capable and that they would not have the need to try them.

"...there is always this trust that a parent has for her/his children" (V2)

V4 on the other hand was surprised when she was provided with some information about the advice that had been spotted on TikTok.

"yes, she is motivated to do these *laughter* sound so new once again ..." (V4)

V1 believed that her sons would be motivated and capable of performing these if these sort of technologies like e.g., Google Family Link would be used. Similarly, V3 thought her daughter was not capable neither motivated to do them and V5 thought her oldest was not motivated and her youngest was not capable. V5 did not express concern around anti-privacy advice as they maintained good discussion in the family. They also negotiated about things, so she did not see that the children are going to start this sort of "rebellion" (V5)

4.5 Parents views on TikTok

The parents were asked about their own opinion about TikTok and how one should act with it. V1 and V4 who stated that they did not use that much TikTok gave the shortest answers. V1 did not have her own account on the platform but still used TikTok to watch animal videos summed it up as follows.

"Quite ok, relaxing, great way to pass time in order to not get bored. As everybody does it (using TikTok) you do it too" (V1)

Also, V4 who said to not use TikTok that often, only used it to watch animal related videos and she was not able to give recommendations on the actions. The other parents, V2, V3 and V5 mentioned addiction in their comments. V2 mentioned two sides in her opinion. The platform is addictive, but it gives many a possibility to make a difference. She did not mention about separate recommendations on how to act with the platform.

"Extremely smartly developed application. Gets people addicted. Depending on what content you follow, hours can feel like minutes. In there you can also influence very strongly. Half a million viewing times makes the creator a celebrity suddenly everybody knows you." (V2)

V3 reported contradictory feelings toward TikTok, she had both positive and negative feeling towards it but highlighted more positive effects than negative.

"TikTok as a social media platform is multiple times more addictive than any other social media platform. Regarding this I have conflicted and negative feelings towards it. As a positive side I see that as an adult I can filter with my media literacy. TikTok also teaches thing quickly and you can get useful tips to your daily life, for example to neuroatypical people, and there (From TikTok) I have

received help and peer support. And I like that there is content that is unadorned, and people can create content even if they are professionals." (V3)

V5 also said that there was always good and bad side of platforms like this. Hence her opinions were overall positive towards TikTok.

"I like TikTok. It's a place that gives me a good vibe, I love to see people from all around the world spreading good vibes, of course it depends on what you are following. But it brings a more positive view about the world and there is a good amount of information. My oldest daughter has deleted the application a few times but downloaded it back as there are so many good art tips. So, if you just could take the positive sides of TikTok it would me amazing. Thanks to TikTok my oldest daughter is so talented at drawing. But where I intervene is that if the using goes to scrolling around. If you have used 2 hours from your 3-hour screentime I support the children to think about addiction that comes from TikTok."

V5 continued to explain the methods on how addiction had been discussed and thought in the family. They had implemented a method where TikTok had been deleted from the device in working days and uploaded on the weekends back to the device to support the children's self-control. This was done to teach the children to manage addiction by themselves. This was also the reason why V5 was not using any sort of locks in the devices to deactivate specific actions and if these were used the children had identified it as blackmailing. In these situations, the family was discussing the situation through and supported the children to take more control. And if these sorts of locks were in use on the devices the children did not get the chance to practice self-regulation and control. V5 also shared recommendations.

"It is better to take TikTok in use so you know what the children are using, one needs to try and stay on top of the trends. But I doubt that TikTok brings violent or sexual content to audience consisting of children, to my understanding ... I may not know enough " (V5)

4.6 Parental recommendations concerning TikTok use

The last question was if the parents had any greetings they wanted to send for example to other parent, teachers, or schools, that also help children to use social media safely. V1 expressed peer pressure around TikTok use but said that she uses it to relax and spent time. She expresses her worry around TikTok's dangers, especially harms that affect in the health.

"More should be taught about the social media use and dangers. Even though it is something that is talked about it is something that should be more and more brought up, especially the health harms should be brought up to the open" (V1)

V2 emphasizes that TikTok is developed incredibly wisely, it has the power to make hours feel like minutes and gives its users a possibility to become famous overnight. She adds that TikTok has made it possible to almost anyone to influence very strongly. In her greetings she likes to remind all to be aware of the dangers and content of TikTok.

"Everybody should themselves go and use TikTok. And the fact that TikTok shows content that you are interested. So, both children and parents get different videos. To be aware of the dangers and content" (V2)

V3 had discordant feelings toward TikTok. Apart from addiction her feelings are positive towards TikTok. She underlines that as she is an adult and has media literacy, she is able to filter the content. She sends greetings to other parents and encourages everyone to use TikTok and sees that it, if anything, is the best way to do social media education.

"I have been thinking and I have worded it to my friends who are at the same age group as me, who have said that they most certainly will never start to use TikTok, even though the age variation in the application is perhaps quite large that they should use the application. This if anything is the best way to do social media education. You will know what kind of content there is and therefore you better understand how to discuss with your children for example why they should not use TikTok, if that is something you want. By doing so you can better explain why." (V3)

V4 only uses TikTok to watch funny animal videos and therefore did not have a clear opinion around TikTok as the use is so minimal. She leaves greetings similar to V3, as she encourages other parents to bravely start using TikTok too. She also notes that interventions should be done more in school.

"New content is created all the time in social media. I myself should also be more bravely involved in social media so that I could be able to be keep on track of the information. So, my greetings are that more use of different social media platforms. And the schools should be more involved as I know that videos have been taken in school secretly, but teachers cannot be demanded to do more as they already do an important job. I don't think there is always enough time. (V4)

V5 has overall positive feelings towards TikTok. She mentioned that it is thanks to TikTok that her daughter is so talented at drawing. She also said that she enjoys positive content on the platform, likes the amount of information shared on it, and enjoys that TikTok presents people from all around the world. V5 also adds that it is better to take TikTok into use so one knows what the children are spending their time with.

"Maybe some basic rule that I like to use: "things are rarely "either or" but rather "as well as". So that things are seldom just black and white. And communication is something I believe in." (V5)

5. Discussion

Internet and different technologies have brought additional things to worry about even if societal and parental fears over children's safety are not new worries (Hartikainen et al.,2015). The aim of this study was to find out parents' opinions and reflections on children's TikTok use by using semi-structured interview. The responses gathered are combined with the findings from previous research to answers the research questions and gain a more in-depth data around the topic. The purpose was to search the current knowledge about TikTok and children and build upon previous data around TikTok and children. The negative effects and threats of TikTok are important to study as only after identifying them, we can make a better attempt to mediate the threats and negative effects to children, so that they get to enjoy a safer social media experience. Hence this study can bring value for parents who act as the mediators of their children's online safety and role models when it comes to social media; but also, for policy makers and people working with IT. In this section the answers are given to the research questions:

- 1. What kind of threats to children's safety in TikTok are Finnish parents concerned about?
- 2. What is the role of parents in addressing the possible threats?

5.1 Answering the RQ1: What kind of threats to children's safety in TikTok are Finnish parents concerned about?

The potential negative effects of TikTok for children are wide-ranging. Based on the previous research and the findings made from the interviews, the threats are stranger danger, cyberbullying, sexualized content, hate speech and misinformation, anti-privacy advice, unhealthy marketing, promotion of eating disorders, addiction, and harmful content.

Child age (Age when use started)	8 (6)	10 (7)	12 (9)	12 (9)	13 (8)	13 (11)	13 (11)	16 (14)
Gender	Girl	Girl	Girl	Girl	Girl	Boy	Boy	Boy
Has been contacted by strangers	\	NI	NI	~	~	~	~	×
Has experienced,seen or cyberbullied	×	×	×	NI	~	~	NI	NI
Has seen hate speech or misinformation	×	×	~	~	~	~	~	~
Has been affected by marketing	>	×	×	~	~	~	~	~
Has attempted challenges	×	~	×	×	×	×	×	×
More screentime due to TikTok	\	×	×	×	~	~	~	~
Has seen harmful content	/	×	×	~	~	~	~	~

Figure 1. Summary of the main findings made in the interviews regarding RQ1.

The main interview findings regarding the first research question are summed up to the Figure 1 above. While the parents were asked about if they have discussed about possible threats of TikTok or social media, it was interesting to notice that without supporting questions two of the parents (V2 & V5) mentioned a threat regarding other users' identity. This finding made from the interviews support the finding made by Family Online Safety Institute (2018) that stranger danger is a most likely concern among parents overall (Family Online Safety Institute, 2018, as cited in Badillo-Urquiola et al., 2019) The results indicate that this was a worry among some of the interviewed parents. And as De Leyn T et al. (2022) underline, the first and foremost

aim of parents is to protect their children from external threats such as stranger danger (De Leyn T et al., 2022).

Strangers had contacted five different children based on the knowledge of the parents. Yet alarmingly only one parent knew who the children are in contact with so the stranger danger might be even higher than found in this study. Most research finds that teenagers are at a greater risk with stranger danger, but this might change as younger children are entering the social media user group than before (Badillo-Urquiola et al., 2019) This is supported by the interview findings. The teenage son of V1 was not reported to have strangers contacting him while some younger children of the interview had been contacted by strangers. As young children and teens are the usual userbase of TikTok, the risk of pedophiles is great on the platform (Vaterlaus & Winter, 2021). This was also reflected in the interview findings. V2 reported that older men were approaching her daughter immediately when she still had her own account on TikTok. Later on, this account was deleted, and the use ended. The daughter of V3 shared same sort of experience as older men have tried to contact her straight after she started to use the application with a public account with direct messages. The parents who had sons did not report to have strangers contacting their children in this matter. Hence the gender differences between girls and boys are noticeable while the boys had not by the knowledge of their parents received contact attempts by older users which are suggestive in nature. This was also found in a study made by Vaterlaus & Winter (2021) as the interviewed female participants had experienced extremely uncomfortable feelings as a lot of creepy older men were seen viewing and liking videos of young kids dancing. (Vaterlaus & Winter, 2021)

Several studies mention cyberbullying being a problem (Anderson, 2020; Weimann & Masri, 2020; Kansok-Dusche et al., 2022; Vaterlaus & Winter, 2021; Kriegel et al., 2021; Mao, 2022). The most usual place where the bullying happens on TikTok is in the comment sections of the posted videos. And when Vaterlaus & Winter (2021) interviewed users who left TikTok they found the participants describing the videos and the interaction being potentially harmful. This was categorized to cyberbullying. (Vaterlaus & Winter, 2021) One child of the interviewed parents had experienced cyberbullying and did stop the use of TikTok for half a year before downloading it back. The child had received hate comments to the videos the child posted on TikTok. This is aligned with research as the cyberbullying happened on the comment sections and the use did end for a period of time. Another parent mentioned that her child has seen cyberbullying on TikTok. Two of the interviewed parents were not able to give answers. But parents' role on the cyberbullying happening on TikTok is to be aware of how the bullying happens specifically on TikTok to further teach and intervene when necessary (Vaterlaus & Winter, 2021). One interviewed parent categorized that the reporting which happens to her underaged daughters account can be seen as bullying. TikTok's privacy policy states that whether anyone believes there is a user who is under 13 years old it should be reported directly to TikTok (TikTok, 2023). The parent shared that as her daughter loses all of the followers and other content along the reporting, it can be felt as bullying. Parental monitoring and online navigation can be helpful tools for parents to control cyberbullying (Mao, 2022). Yet only one interviewed parent used Google Family link extensively with a wide range of other manual moderating techniques while other parents reported not to use any technologies or if used it is merely to ban adult content or the use of Google Family Link is limited as fights happen if it is used.

Three parents said to have had discussion around sexualization and one parent admitted that the topic is timely to be discussed in the future. One parent also reported that her child has shown interest in pole dancing while two parents reported that their children have seen sexually revealing content on the platform. TikTok is an environment susceptible to sexualization as there is a high level of hypersexualization in the most viewed pages. Also, a large portion of children under 10 years have not had any teaching or explanation of any kind of code of conduct about sexualized content. (Soriano-Ayala et al., 2022) Some similarities were found in the interview findings and previous research. Soriano-Ayala et al. (2022) recorded that the girls felt a bigger pressure to obtain the ideal image and were more compelled to make changes to their appearance. A concern for not fitting into body and beauty ideals exists and it could explain why fatphobia was mostly mentioned among children. Previously one parent mentioned about her daughter being in constant struggle with her reflection on the mirror and being afraid to gain weight. And while discussing about sexualization she has been wanting to start a pole dancing hobby. The parent admitted that her daughter has been influenced by the sexualization content. Also, two of the interviewed parents had not had the discussion around the sexualization topic. Both of these parents had daughters.

Among the interviewed parents, only one child had not seen hate speech or misinformation on TikTok. Every social media platform is struggling to handle the issues regarding hate speech on their platform and keeping users safe from harm, threats, and harassment (Anderson, 2020). Three of the parents reported that the hate speech was racist in nature. On top of this one parent mentioned that her child has seen hate speech toward the sexual minority groups aka. LGBTQI+ community. The negative feelings that hate speech brings to children are identified to be anger, shame, or sadness as well as lack of trust. Yet, small fraction is known about research done regarding children and hate speech (Kansok-Dusche, 2022) The interview findings revealed that the children who saw hate speech on TikTok which was racist felt sadness, fear, lack of trust. While the child who had seen hate speech toward LGBTQI+ community felt anger. Hence findings made by Kansok-Dusche (2022) are supported by the findings made by the interviewed parents Also, the popularity of TikTok among children has worsen the risks of younger children being exposed to mis/disinformation through their interaction online (Howard et al.,2021). While all but one parent was sure that their children has seen mis/disinformation on TikTok one parent among the interviews admitted that she needs to constantly correct her child's information that he has heard from TikTok.

Anti-privacy videos posted on TikTok share advice on how to surveill or control others with technology Videos targeted for children motivate the child to disable tracking or restriction with a desire for better autonomy, especially in the case of restrictions such as applications. (Wei et al.,2022) Only one parent knew that these advices exist among the interviewed. Two parents saw their children being motivated to act upon the advice seen, but only one of them used Google Family Link every now and then. De Leyn et al. (2022) found that parents are feeling like they have loosed control over their children's life trajectory and are having issues with a perceived loss of household's protective bubble in the digitalized society of today (De Leyn et al, 2022). Same sense of fear was noticed from one of the interviewed parents. She did not know about the anti-privacy advice but nervously laughed and stated that her daughter is motivated and capable of performing these. The same parent had had difficulties implementing Google Family Link without a fight with her daughter and mentioned that she knows some of the passwords that are set to the safety technologies.

Even as the amount of research done around children and influencer marketing is almost inexistent (De Veirman et al., 2019), this sort of marketing is only growing and becoming highly popular among the most used social media platforms, including TikTok. Children under 12 years have limited advertising literacy skills, hence they are a fragile target group when it comes to persuasion (De Veirman et al., 2019). The interviewed parents

uphold this with their answers. All of the parents except one identified that marketing seen on TikTok has indeed influenced their children's behavioural change. One parent mentioned that all of the Christmas present wishes were straight from TikTok, while another parent said that the marketing seen on TikTok has an enormous influence on her daughter. Influencers and their message are perceived as highly credible rather than marketing speech. Children aim at taking on their attitude, beliefs and lifestyles including products that appear on the posts of these influencers. (De Veirman et al., 2019) The parents recorded that their children's clothes, makeup, skincare, diets, daily routines, hobbies and even room decor are the outcome of TikTok marketing or have been influenced by marketing seen on the platform. Therefore, the previous research – even if it was a small sample as the amount of research done around the area is small – is supported with these interview findings.

Addiction was highlighted among three of the parents and they showed real concerns around the addictiveness of TikTok and how wisely the application is built to make the user engage for hours that can feel like minutes. Three parents reported that their child's screentime has increased while using TikTok. Kriegel et al. (2022) and Marengo et al. (2022) also see that TikTok is addictive (Kriegel et al., 2021; Marengo et al.,2022). Marengo et al. (2022) report in their study that children who said to use TikTok while using other highly visual social media typically showed a higher risk of addiction on social media than children who did not use TikTok. (Marengo et al., 2022)

Kriegel et al. (2021) highlighted that children are prone to the influence of the challenge videos as they seek peer attention and acceptance in form of likes by participating in them. Parents need to monitor whether their children join risky challenge videos seen on TikTok (Kriegel et al., 2021). None of the parents mentioned that their children have had any physical harm from TikTok use or saw it as a possible threat in the future. The younger daughter of V5 has involved in a 24-hour challenge where she also spent the night outside. V2 reports that her son's friend has been seriously injured while attempting a challenge seen on TikTok, at the same time she has noticed that the challenge videos have decreased in number as time has went on and they are not popular anymore.

A distinctive feature of TikTok is that users are watching videos from strangers on top of chosen friends, this gives a possibility to spread content of abusive nature in new ways without being caught by moderation (Weimann & Masri, 2020) Yet TikTok is seen overall as a positive platform among children, still at the same time they need to accept a climate which is prone to cyberviolence and reactivity. Soriano-Ayala et al. (2022) All except one of the parents involved in the interview admitted that their children have most definitely seen harmful content on TikTok, one of the parents stating that you cannot avoid seeing harmful content on the platform. The one parent who did not think her children have seen harmful content saw it as a real possibility in the future. Hence the interview findings support the previous research. Participants in the study of Vaterlaus & Winter (2021) found that the videos shown on TikTok and interaction on it has potential to be harmful to users (Vaterlaus & Winter (2021). The scan of Weimann & Masri (2020) revealed that TikTok has also content of Far-right extremism. TikTok has started to attract various malevolent predators including pedophiles, terrorists, and extremists. (Weimann & Masri, 2020) Three out five parents shared that their child has seen highly visual adult content on the platform including intercourse and a man's genitalia.

5.2 Answering the RQ2: What is the role of parents in addressing the possible threats?

Pedrouzo & Krynski (2023) give a list of recommendations to support safe social media for children and one of the recommendations is that children under 13 years should not use it (Pedrouzo & Krynski, 2023). Regardless of this, TikTok is the most popular platform among 8 to 12 years olds (De Leyn et al., 2021), even though TikTok informs in their privacy policy that one needs to be at least 13 years old to use the platform (TikTok, 2023). At the time of the interview, three of the parents had children who use TikTok and are under 13 years old. It should be noted that when the parents were asked how long the children have been using TikTok, each of the children except 16 years old have used TikTok underaged. To sum it up the children have started to use TikTok when they were 6 to 11 years old.

Child age (Age when use started)	8 (6)	10 (7)	12 (9)	12 (9)	13 (8)	13 (11)	13 (11)	16 (14)
Parents daily social media use (hour)	4	1,5	1,5	5-6	2	4	1,5	1,5
Parent knew about Family safety mode	×	×	×	×	×	×	×	×
Parent knows who the child is in contact	~	×	×	×	×	~	×	×
Has safety technologies in use	~	~	×	×	~	~	×	×
Has discussed about eating disorders	~	×	×	×	×	~	×	~
Has discussed about sexualization	~	×	×	×	~	~	~	~
Has had discussion about the harms	>	~	~	~	~	~	~	~

Figure 2. Summary of the main findings made in the interviews regarding RQ2.

Above Figure 2. presents a summary of the main findings made in the interview regarding the second research question. As the social media identity of the interviewed parents was revealed, it was clear that all of the parents are active internet and social media users. This does fit with the previous research as most parents spent a lot of time online on their phones. It is also stated that parents can be distracted with their devices when interaction with children is happening. (Harriger et al., 2022) One of the interviewed parents was an influencer herself, meaning that she makes actively content on multiple different platforms but mostly on Instagram. When the parents were asked about their opinion whether they use social media safely and effectively, one common theme which rose from the answers was hope and believing. Also, three of the parents were not sure about it. So, in a nutshell the answers did not highlight a lot of confidence on the issue.

The amount of social media use ranged from 1,5 hour to 6 hours a day and two of the parents (V2 & V3) identified themselves that they are very active and overconsume social media. Harriger et al. (2022) found that parents should model a healthy relationship with social media to their children. This also included the behavior of limiting screentime spent on social media (Harriger et al., 2022). The parent's own social media use did not show to have an effect on the children's social media use. The most active parent did not report to have her child to having more screentime due to TikTok, but the second most active parent did. So, a straight line to conclusions cannot be drawn from this.

Parents need to guide and monitor their children to manage their profiles to support the privacy and control who can comment on the videos posted in the children's profile (Vaterlaus & Winter, 2021) The son of V1 and the daughters of V3 and V4 made content on TikTok in the time of the interview, but none of the parents knew who comments or interacts with their children on the comment section. And none of these parents said that

their children would have the comments switched off. V2 was the only one who knew who the children are in contact with on TikTok. Pedrouzo & Krynski (2023) state that limiting children's access to images and information to users who are close to their child is suggested (Pedrouzo & Krynski, 2023). Still only V2 knew to say that her son follows both international and Finnish influencers who make gaming and car videos on the platform. Hence V1, V3, V4 or V5 were not able to say who the children interact with even though all of the children reported to give likes on TikTok.

Technologies aiming at supporting active mediation for family communications regarding online safety between children and parents is crucial (Rutkowski et al., 2021). Google Family Link is an example of a software which makes it possible for parents to set up controls for their children's devices. This enables e.g., activity and app monitoring on top of screentime setting and other features. (Pedrouzo & Krynski, 2023) All of the parents except one use or has used the Family link. But there was a lot of variation between the type of use of this technology. V5 only uses it to restrict adult content, while V2 uses it as a penalty. V4 says that the technology is rarely used anymore as it brings a lot of emotions to surface and the situations usually lead to fights. And if the technology is used it is used with fewer features. On top of this the parent informs that her child knows a couple of passwords for the parental software and uses them secretly. V3 does not have the technology in use at the moment and V1 did not report on using any technologies to moderate the children's device use. So, it could be summed up that none of the parents use Google Family link actively with all of its safety features to monitor and support children's safe device use.

It is also recommended that parents activate TikTok's own parental controls. These parental controls allow the parent to link their own profile to their children's account. The family safety mode gives parent multiple possibilities to protect and monitor their children on TikTok. (Pedrouzo & Krynski, 2023) When asked, none of the interviewed parents used family safety mode or family pairing provided by TikTok. The common reason was that the parents did not know that these features exist. V3 admitted that she is still new on the platform and has still a lot of things to learn. The fact that none of the parents knew about TikTok's parental controls might reveal that the parents do not have deep knowledge about the features of TikTok after all, even though all of them reported to use TikTok.

On top of third-party software and TikTok's own parental controls, contracts with children are recommended. These contracts are rules and regulations set with and for children, for their social media usage. The consequences that come from breaking the contract are mutually important (Harriger et al., 2022). These were implemented by two of the parents. V2 states a list of different rules her children follow including phone free mealtimes, nigh time and screentime. V1 also mentioned a rule that no phones are used during night-time with one of her sons. Both of the parents said that their children have approved the actions without a fight. V1 has not had a separate discussion around the screentime restriction. V2 on the other hand has had discussion around the safety measures that take place with her children and the response was positive as most of the children's friends also have restrictions set in place.

Each of the parents had had discussion with their children around the possible threats involved around TikTok and other social media use. This goes along with the literature as the importance to discuss about negative effects that come with social media use with children is underlined also by Harriger et al. (2022). Active parental mediation is important among parents and teens to maintain a healthy communication environment (Rutkowski et al., 2021). V5 expresses the relationship with her children as

communicative and underlines the aim of supporting her children's own skill to selfregulate. She also adds that she trusts her children and that they discuss often about feelings and topics surrounding TikTok and social media use. Pedrouzo & Krynski (2023) highlight a same sort of aspect. Children should be guided to develop a critical opinion towards the information received. This is helpful when it comes to e.g., misleading advertising and avoiding exposure to cyberbullying and inappropriate content. (Pedrouzo & Krynski, 2023) V2 and V3 also underline the amount of discussion happening with children. V2 reports continuously keeping the discussion going with her younger daughter if she has experienced anything scary on TikTok. V3 said to have had discussion around safe social media use and TikTok since the day her daughter had her own phone. One thing which is brought to surface is that V3 and V5 encourage their child to tell if someone approaches them and avoid stranger online as everyone is not as they seem to be online. V1 reports having discussions with one of her sons now and then, if his school has reported that a video with harmful content is spreading on TikTok. On top of this, overall discussion has been held with her sons to explain that not everything one sees on TikTok is real. Hence three of the parents have talked with their children about the possible false reality that can be presented on social media. The literature also underlines the importance of this. Harriger et al. (2021) state that discussion about unrealistic images online, algorithm that aims to keep its user engaged and tools used to edit content online are all important topics (Harriger et al., 2021). V5 mentions that there could be even more discussion around possible threats involved around TikTok. She also believes in the TikTok algorithm to not show anything that might be harmful for her daughters.

It is crucial for parents to educate themselves about TikTok and its features, understanding the trends on TikTok is more and more important (Kriegel et al., 2021). It is vital that parents who are unfamiliar with social media to investigate the confusing platforms. Unawareness and inattentiveness could still be the biggest obstacles for parents to intervene against cyberbullying. Hence parents need to educate themselves on the way their children's use social media and familiarize themselves on different platforms and features. (Mao, 2022) What comes to the parents, V3 also identifies this and thinks that the more you are involved the more you know about the content published on TikTok and this helps to build discussions around TikTok with children. V2 and V5 also underline the importance of this. Both parents recommend that parents should be more involved on TikTok and use it by themselves to learn from it. V5 highlights the need to stay on top of trends and V2 mentions that it should be taken into consideration among parents that the algorithm brings different content to different users.

V4 admits that she should be more involved on social media so that she would be able to be on track of the new information which comes all the time. She also felt that she is not capable of giving any recommendations on how TikTok should be approached because she feels like she does not know enough. V1 did not know either what kind of recommendations she could give. It needs to be noted that among all of the parents interviewed; V4 and V1 were the ones who reported to use TikTok the least. The education discussed around what parents should teach to themselves, also includes the teaching which goes to children. Kriegel et al. (2021) report that children need to be taught about digital footprint that is left on social media as it forms the children's digital identity, and it is permanent and public. Also, tools, education and support need to be given to children to protect them from the risks of TikTok. Only after children are able to identify a risky situation, they are able to report malicious users and ask guidance from parents. (Kriegel et al., 2021)

Sharenting has brought additional things to worry about around the topic of children's privacy and safety online. Children want their parents to ask for permission before posting

content online more regularly than the parents think they should. Yet, parents in the study of Moser et al. (2017) felt that they should ask permission more often (Moser et al., 2017). All of the parents included in the interview have and do share content about their children on social media. The content is posted on Instagram and also in the case of V4, on Facebook. V2 mentioned that her sharing habits around post including her children has changed as safety concerns have increased, and hence she does not share as often. V5 was the only one who independently shared that she always asks permission from her children before posting content about them. Yet, Instagram stories were reported to be a place where she adds content with a lower hesitation.

Amon et al. (2022) found that parents did not see a big difference in sharing general content and content about their children on social media (Amon et al. 2022). I asked the parents about their opinion about sharenting accounts. V1 answered shortly: "Why not?" and V3 similarly stated that she has a neutral opinion about these accounts. These answers might support the finding of Amon et al. (2022) that parents do not see a difference between regular content and content shared about children. V5 also stated that she does not have an opinion but underlined that it is important to ask permission before posting. V2 and V4 had a bit more to share. V2 said that it is a mixed blessing, she would not like to be the child whose face and stories are shared for a wide audience. In her opinion the child could have negative effects from the sharing experience including loss of privacy and bullying what might come from visual content shared. V4 on the other hand sees that sharenting is not a problem if the identity or in other words, the face of the child is private until the child turns 12 and has the ability to give permission.

V2 was the only parent who follows sharenting accounts and V4 had a history of following these sorts of accounts. V2 shows a concern around the sharenting accounts she follows and said to have felt horrified by the fact that there does not seem to be anything else to publish than content about children. She shared a thought that until the first negative contact or threat arrives to account's owner, the publishing will continue. It is to be mentioned that V2 has had a negative interaction on social media herself previously in form of intrusive messages. Pedrouzo & Krynski (2023) report that the underlying reason for sharenting was the fear of missing out and the need to engage in a social network. There is a general disconnection between what research suggest is risky behavior and what parents consider risky. (Pedrouzo & Krynski, 2023)

6. Conclusions

The aim of this study was to find out what are the possible negative effects of TikTok for children, and what is the role of parents in addressing these negative effects. The study was conducted by implementing a literature review and a semi-structured interview with five Finnish parents whose children use TikTok. The total amount of children ended up being eight. The findings suggest the potential threats of TikTok for children are addiction, contact attempts by strangers, cyberbullying, hate speech, misinformation, unhealthy marketing, anti-privacy advice, promotion of eating disorders, and harmful content. The parent role in addressing these possible negative effects is to educate their children and themselves about TikTok, use it and discuss all possible negative effects that TikTok can bring to children with them. Parents also need to model a healthy relationship with social media to their children.

6.1 Implication for research and implications for practice

The discussion around TikTok and children is present in media very widely. The amount of research done around the topic is good but still has a lot of room for new contributions. Hence this study brings the topic to surface for research in the hopes these issues are studied more in the future. The implications for practice are more technical. This study revealed several negative effects that TikTok can bring to children. Hence the privacy, security and children's rights are aspects that need more work in practice from professionals working in IT to professionals working with children's rights and social media. Persuasion in form of influencer marketing and young children and algorithms that can reveal harmful content to children on TikTok are aspects of the tasks that still need more work from professionals. Marketing experts should also work on the effects of social media marketing in the context of children. For parents, schools and teachers who educate children on safe social media use this study highlights some of the important practices on how children should be taught about the threats and negative effects of social media. This study can also open the eyes of many on some of the negative effects that TikTok can bring.

6.2 Limitations and future research

It should be noted that V5 had made some searches around TikTok before attending the interview. After examining the interview answers of the same parent, the question: "Do you use the features Family safety mode or Family pairing provided by TikTok?" is the only that the parent openly said to have made research on but still said that without the interview she would have not done the searches. Therefore, the answer to this question is solid as the parent admitted that the features are not something she is familiar with. The same parent did not mention anything about the same search event to have any effect on the other questions. Also, this was the only question about TikTok which was approached from the technical perspective in a form of information security technology. What comes to the overall interview participants, all of the interviewees were Finnish female, hence the gender and nationality might have influenced the content gathered provided by the interviewees. The amount of interviewees can also be seen as a limitation on its own as only five parents were participating in the semi-structured interview.

Future research should concentrate on the possible issues regarding sharenting and TikTok. Sharenting is not that new when it is talked in regards of social media, but as social media is a rather new concept itself and as new platforms are continuously

developed the questions around children's rights need to have their place in the discussion. More research is still needed on the possible positive effects of TikTok such as educational potentiality. As this research consist of the threats and negative effects that come along side it, positive effects can promote the need to upgrade TikTok for better. Other interesting and still more research needing areas around TikTok are the technical side of it, including the algorithm, artificial intelligence, and information security. As previously mentioned, addiction and TikTok do not have a wide range of research done even if TikTok has special features that can make it more addictive than other social media. Hence addiction and TikTok should be studied more regarding different user groups, but especially children. Also, possible cultural differences between countries and TikTok use could use more research. At the time of this research United States have on going trials with TikTok where a few states are looking into banning TikTok overall and in some countries the use is restricted only to daytime by the government like in Asia. These are all aspects that still need a lot more research to find out the actual scale of this growing and powerful social media platform.

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Appendix A. Research permit



Hyvä haastatteluun osallistuja,

Tässä dokumentissa pyydän suostumustanne tutkimukseni haastatteluun osallistumisesta ja esittelen maisterintutkielmani pääpiirteet.

Tutkin maisterintutkielmassani mitä mahdollisia haitallisia vaikutuksia TikTok:lla voi olla lapsille. Tavoitteenani on laajentaa tietämystä mm. tietoturvariskeistä ja haitallisista sivuvaikutuksista. Lasten vanhemmilla on suuri ja usein vaativa tehtävä toimia lasten turvaajina myös verkossa, täten olen kiinnostunut keräämään vanhempien ajatuksia aihepiirin ympäriltä. Tavoitteena on kerätä arvokasta tietoa TikTokin mahdollisista haittavaikutusta ja tämän kautta mahdollistaa kaikille, myös lapsille, turvallisia ja hauskoja hetkiä sosiaalisessa mediassa myös tulevaisuudessa.

Suomalaista tutkimusta aihepiirin ympärillä on vähän, englanninkielisiä julkaisuja aiheesta puolestaan on saatavilla. Suoritan maisterintutkielmani myös englanninkielellä, mutta haastattelu on suomeksi, täten käännän löydökset englanniksi.

Haastatteluissa syntyy teksti-, ääniaineistoja. Eri menetelmin syntyneitä aineistoja voidaan tutkimusaineiston analyysivaiheessa yhdistää. Aineisto arkistoidaan INTERACT tutkimusyksikön toimesta pitkäaikaiseen tutkimuskäyttöön. Tutkimusaineistoa tullaan hyödyntämään maisterintutkielmassa. Julkaisuissa ja tieteellisissä esitelmissä aineistoa käsitellään osallistujien yksityisyyttä kunnioittaen siten, ettei tutkimukseen osallistujia voida aineiston pohjalta tunnistaa. Pyydän osallistujalta suostumusta osallistua tutkimukseen ja siihen, että tutkimuksen aikana syntynyttä aineistoa voidaan käyttää tutkimustarkoituksiin. Osallistuja voi milloin tahansa peruuttaa antamansa suostumuksen ilmoittamalla peruutuksesta minulle. Osallistuja voi myös missä tahansa vaiheessa tutkimusta itse päättää, mikäli haluaa jättää koko tutkimuksen tai jonkin sen osan kesken.

Täytä ja palauta tutkijalle

Osallistun tutkimukseen ja annan luvan, että tutkimuksessa syntynyttä ja siihen tuotettua materiaalia voidaan käyttää tutkimus- ja opetustarkoituksessa. Olen lukenut ja ymmärrän tätä tutkimusta koskevan tietosuojailmoituksen. (ks. seuraava sivu)

Osallistujan nimi:			
lkä:	Ammatti:		
Osallistujan allekirjoitus, nimenselvennys ja päivämäärä:			

Tutkimuksen nimi, luonne ja tutkimuksen kestoaika

Tutkimuksen nimi: The dark side of TikTok in use of children / TikTokin pimeä puoli lasten käytössä

Maisterintutkielma

Tutkimuksen kestoaika (kuinka kauan henkilötietoja käsitellään):
Tutkimuksen aineistonkeräys loppuu vuoden 2023 aikana. Tämän jälkeen
tutkimusaineistoa käsitellään ja arkistoidaan sellaisenaan pitempiaikaiseen käyttöön
tutkimus- ja opetustyötä varten. Henkilötietoja käsitellään seuraavalla yleisen
tietosuoja-asetuksen 6 artiklan 1 kohdan mukaisella perusteella: tutkittavan

Lisätietoja henkilötietojen käsittelystä ja säilytyksestä voi katsoa INTERACT-tutkimusyksikön tietosuojailmoituksesta:

https://interact.oulu.fi/site/tietosuojailmoitus

Tutkimuksen osapuolet

Tutkielman suorittaja: Iida Rinnasto

Yhteyshenkilö: Iida Rinnasto, (iida.rinnasto@student.oulu.fi) Oulun Yliopisto.

Tutkielman valvoja: Netta livari, (netta.iivari@oulu.fi) INTERACT tutkimusyksikkö, Oulun yliopisto.

Ota yhteyttä, jos haluat saada lisätietoa tutkimuksesta tai käyttää rekisteröidyn oikeuksiasi.

Appendix B.

Semi-structured interview: questions

Basic information

- How old are you?
- What do you do for work?
- How many children there are in your family?
- How old are your children?
 - o Which of them use TikTok?
- What is their gender?

Parents social media use

- How do you see yourself as a social media user?
 - o What devices you have in use?
 - o How many hours do you use social media in a day/week?
 - O What platforms do you use?
 - o How to you interact on social media?
 - Do you do your own content?
 - Do you take part in discussions?

Does content → Do you ever publish content about your children on social media? E.g., pictures, videos or stories?

- Do you use a lot of internet /& social media in your work?
- Do you believe you use social media both safely and effectively?

Children's TikTok use

- What devices your children have in use?
- Do your children use TikTok on all of these devices?
- How does your children use TikTok?
 - o Does she/he make content?
 - o Does she/he use the direct messaging feature?
 - O Does she/he comment on other users' content?
 - O Does she/he give likes on the content?
 - O Does she/he mainly scroll the for you -page?
- How long have the children been using TikTok?
- Do your children have a private account on TikTok?
- How long do the children spent time on TikTok approximately?
- Does the use happen at home or outside home e.g., at school or hobbies?
- Do you know what motivated your children to start using TikTok?
- Do you know why your children still want to use TikTok?

Parents safety measures

- Do you use TikTok's own family features like family safety mode of family pairing?

- o Why/Why not?
- Do you have any other technologies or safety measures in use for your children's online safety? E.g., manual moderating, applications that prevents in app purchases or downloads?

Yes \rightarrow Have you discussed about these actions with children?

- Why not?/How did the children reacted and did anything happen e.g., ending the use of the software?
- Have you teached and discussed with your children about the possible dangers around TikTok and safe social media use?
- Do you know who your children are in contact to on TikTok?
 - o Followers
 - Following
 - Direct messaging
 - Comment section

Negative effects of TikTok

- Have you noticed any changes in your childrens behavior that can be connected to the use of TikTok?
 - o Increased screentime
 - Change of appearance
 - o Diet
 - New hobby

Yes →Do you see that marketing on TikTok for example recommendations given by influencers or TikTok's adds have influenced this?

No → Have you seen that the consumption behavior of your children have changed because of TikTok adds and influencer recommendations seen on TikTok?

- Has your child said that they have experienced unpleasant feelings such as anger, shame, sadness or a feelings of insecurity because of TikTok's content?

Yes \rightarrow

- O What kind of video?
- o What kind of feelings?
- O Did the use of TikTok change after the event?
 No →
- o Is this the type of threat that can probably be encountered in the future?
- o Why / why not?
- Are you aware if your child has seen hate speech on TikTok? That is e.g., comments or videos that encourage hatred or violence against a certain group of people based on e.g., their skin colour, sexual orientation or religion?

Yes →

- O What kind of video?
- O What kind of feelings?
- Did the use of TikTok change after the event?
 No →
- o Is this a type of threat that can probably be encountered in the future?
- o Why / why not?
- Unfortunately, over the years, eating disorders and TikTok, like other social media, have become a couple that keeps their head above water, have you discussed the topic with your child?

- Have you discussed or told the child about sexualization, for which TikTok is a very suitable platform?

Yes → How did the children reacted?

No → For what reason? Is it perhaps difficult to deal with the topic or has it just not become topical?

- Has your child experienced physical harm from using TikTok? For example, risky challenge videos

Yes \rightarrow

- O What kind of harm?
- O Did the use of TikTok change after this?
- o Is this a type of threat that can probably be encountered in the future?
- o Why / Why not?
- Do you know if your child has seen potentially harmful content on TikTok? E.g., violence, nudity, bullying, false information about things or substance use (Hypersexualization

Yes →

- O What kind of video?
- What kind of feelings where the children going through?
- O Did the use of TikTok change after the event?
 No →
- o Is this a type of threat that can probably be encountered in the future?
- o Why / Why not?
- Has your child encountered contact or interaction from people he does not know, e.g. in the form of message requests or comments?

Yes \rightarrow Can you tell more?

- Do you know if your child has been bullied or seen or experienced bullying on TikTok?
- Are you familiar with the anti-privacy advice?

No →

Anti-safety advice aimed at children has become a worrying trend on TikTok. With the help of these tips, children have been guided how to turn off location sharing, or how to trick the location into showing home even if the child is really somewhere else.

The advice also includes instructions to e.g., disable applications via VPN that limit the child's use of social media and limit visible content.

 Do you think your child is capable or motivated to perform these procedures?

Yes →

• Where did you learn about them?

From a child → Why did the children tell you about them? Did she/he see that content on TikTok?

Independently → Have you discussed this with your children?

■ Why / Why not?

Sharenting and greetings

- What do you think about parents who have become famous by sharing their daily life with children/family life?
- Do you follow such so-called momfluencers yourself?
- What do you think about TikTok and how it should be handled?

- Do you have greetings for different parties that help children use social media safely, e.g., other parents, teachers, or schools?