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## **Uses and gratifications sought by pre-adolescent and adolescent TikTok consumers**

### **Abstract**

**Purpose** - *The purpose of this paper was to explore the uses and gratifications sought by the primary target market (pre-adolescent and adolescent groups) of a new social media site, TikTok. The paper also sought to identify how much of a role the motivations of self-expression, social recognition and fame-seeking (important considerations within adolescent psychology development) played in the use of this particular SNS.*

**Design/methodology/approach** – *Following meticulous sampling procedures, ensuring national representation and stringent ethical practices, self-completion questionnaires were sent to pupils at 60 schools in the five key administrative regions of Denmark. The data was examined using analysis of variation tests, followed by a two-step cluster analysis using the log-likelihood method.*

**Findings** - *The findings indicated that passive consumptive behaviours were prevalent amongst both pre-adolescent and adolescent group and that the gratification of entertainment/affect was the primary driver behind all behaviours: passive consumptive, participatory and contributory. Pre-adolescent groups were more active and heavier users of TikTok than were adolescents. In line with adolescent psychology theories, we found that contributory behaviours were motivated by a wish to expand one's social networks, by fame-seeking, self-expression, and identity-creation needs.*

**Originality/value** – *We extend our understanding of the contributory functions of SNS. Motivations of fame-seeking, self-expression and social recognition are key to understanding the uses and gratifications of TikTok consumers, especially during the adolescent years;*

*contrary to scholarly assertions that these motives are often unconscious, our sample assertively and explicitly confirmed these needs. A further novel insight of our study was that both the gratifications of relationship building and relationship maintenance were sought out via the contributory, rather than the participatory function of TikTok.*

**Social implications** – *Pre-adolescent consumers are heavier users and interact more with the TikTok SNS than adolescent consumers, including in relation to seeking out new social networks. This is potentially of great concern as children are less likely to understand the hidden dangers of online predatorial and privacy issues.*

**Keywords** *Social media site, TikTok, adolescent psychology, uses and gratification, identity-creation, fame-seeking*

**Paper type** *Research paper*

Although heavy use and engagement with social networking sites (SNS) are particularly prevalent amongst the so called young digital natives (Kelleci and Inal, 2010; van den Eijnden *et al.*, 2010), children's needs and concerns in relation to digital applications and platforms have been largely neglected (Creswick *et al.*, 2019). Nearly half of adolescents visit SNS on a daily basis (Tsitsika *et al.*, 2014) and spend an average of one hour per day dedicated solely to social media use and networking (Rideout and Fox, 2018). An increasingly popular social networking site amongst pre-adolescent and adolescent groups is TikTok, where users are able to produce, edit and share 15-second videos of themselves displaying talents such as dancing, singing, playing football, and so forth. These videos can be shared through the user's own profile, and users may share, like, edit or re-produce content made by others. Currently, TikTok has over 500 million users, mostly among pre- and late adolescent groups. One unique feature of TikTok is that users have the opportunity to "become someone" on the site relatively easily (Leight, 2019). Indeed, since its inception in

2017, several music industry professionals have declared TikTok as instrumental in promoting and launching new talent (Bereznak, 2019).

This article examines the appeal of this new SNS through the lenses of uses and gratification (U&G) theory (Katz, 1959; Katz et al., 1974; Ruggiero, 2000), psychological theories of self-actualisation and identity creation (Goffman, 1959; Bargh, McKenna and Fitzsimons, 2002), and encapsulates these within Shao's (2009) analytical framework which assumes that individuals engage with SNS in three specific ways: by passively consuming, by participating and by contributing content. The study further posits that these three different categories of uses are driven by ten different motivations, as outlined by U&G theory.

Hence the current study contributes to past research by:

- expanding the uses and gratification literature, which is proving to be especially valuable in the study of SNS (rather than traditional media) use:
- providing data and analysis which is based on meticulous multi-stage cluster sampling procedures, seeking to ensure national representation and an adherence to strict codes of ethical practice when dealing with minors;
- examining the relationship between pre-adolescent and adolescents' developmental need for identity-creation, a desire for social recognition, self-expression, and associated usage behaviours on a relatively new and popular SNS platform: TikTok;
- contributing novel insight into the similarities and significant differences between the uses and gratifications sought by pre-adolescent and adolescent individuals on SNS;
- finding new evidence that affect/entertainment is the primary U&G gratification sought at the passive consumptive, participatory and the contributory levels (contrary to other recent studies in the field, i.e. Dolan et al., 2019);
- uncovering evidence to suggest that pre-adolescent and adolescent groups are much more

likely to use TikTok to gratify their needs for identity building and fame-seeking, than are a slightly older generation of 20-34 year olds (see Omar and Dequan, 2020);

- finding evidence to suggest that young consumers are engaging in contributory behaviours at a much earlier stage in life than previously thought;

- discovering novel insight which suggests that the gratification of relationship building and relationship maintenance are sought out primarily via the contributory, rather than the participatory function of TikTok; and thereby extending our understanding of the contributory functions of SNS.

- confirming the need to take the transition between childhood and adulthood seriously, as individuals at this stage of development can be particularly vulnerable to socio-psychological influences.

### **Theoretical foundation**

The application of U&G theory is by no means a new line of research. Several scholars have utilised the framework to investigate the social and psychological motives behind traditional media usage (Babrow, 1987; Elliott and Rosenberg, 1987; Leung and Wei, 2000) alternate media choices (Katz *et al.*, 1974), and more recently SNS attitudes and behaviours (Gan and Wang, 2015; Hsu *et al.*, 2015; Gan and Li, 2018). Although criticisms of the framework abound (see for instance Courtois *et. al.*, 2009; Katz *et. al.*, 1974), U&G has proved particularly relevant in the analysis of media in which the audience plays an active role and provides user-generated content (UGC) (Morris and Ogan, 1996; Shao, 2009; Gan and Wang, 2015; Gan and Li, 2018). Rubin (2002) and Ruggiero (2000) noted that the emergence of new media forms had revived and rejuvenated U&G theory, and suggested that emerging media formats which had unique defining characteristics (such as TikTok) were ripe for examination under this theoretical lens.

Shao (2009) suggested that individuals deal with user-generated mediums in three ways: by passively consuming, by participating, and by contributing. Passive consumption refers to the individuals who only watch, read, or view, but never participate. Participating includes both user-to-user interaction and user-to-content interaction (such as ranking the content, adding to playlists, sharing with others, posting comments, etc.). It does not include one's actual production. Contributing encompasses the creation, production and publication of one's personal contents. It follows that different uses are driven by different motivations: people passively consume for cognitive (e.g. news, information, updates) and affective reasons (e.g. entertainment and fun), participate for communication and relationship building purposes, and contribute by producing home-made content for fame-seeking, identity-creation and self-actualization purposes. Table 1 brings together the behavioural conceptualisation envisaged by Shao (2009) and the ten primary SNS gratifications outlined by seminal works in the field.

INSERT TABLE 1 HERE

### ***Hypotheses development***

The current study examines how the primary target audience (pre-adolescent and adolescent individuals) of TikTok uses and interacts with the content, as well as other users, and seeks to uncover the key uses and gratifications of this SNS.

### ***SNS and passive consumptive behaviours***

Regardless of age, previous studies suggest that passive consumptive needs (surveillance, relaxation, information and entertainment seeking) are by far the most important gratifications sought when it comes to SNS usage (Barker, 2012; Quan-Haase and Young, 2010; Sheldon and Bryant, 2016; Tanta et al., 2014; Whiting and Williams, 2013). Users of Facebook and Instagram report that the platforms act to fulfil their need for knowledge and surveillance of others (friends, acquaintances, and celebrities) (Whiting and Williams, 2013).

Urista et. al.'s (2008) study found that the majority of people used SNS for surveillance purposes; whilst others have reported to want to be "in the know" and to demonstrate "social know-how" (Quan-Haase and Young, 2010). SNS allows consumers to passively observe the lives of their peers and to gratify the need to continuously be kept informed about changes happening without engaging in any form of dialogue (Shao, 2009). Others simply find passive social media activity to be relaxing and use SNS to escape from reality and boredom, to pass the time, and to divert attention from responsibilities (Quan-Haase and Young, 2010; Tanta, et. al, 2014). Specifically amongst a group of 20-34 year old TikTok consumers, Omar and Dequan (2020) found escapism to be a prevalent motivation.

The literature indicated that passive consumptive surveillance features is the other key gratification sought out on SNS sites by adolescence. They report to be interested not only in "finding out what my friends are doing", but are also interested in "following celebrities"; these reasons are more likely to be given by early adolescent (age 12-14) than late adolescent (age 18-20) groups (Courtois et. al., 2009). Seemingly, affect/entertainment is often rated as the top motivation for adolescent groups, but most so for individuals within the early adolescent category (Dunne *et al.*, 2010; Kim, Sohn and Choi, 2011; Park et al., 2009; Sheldon, 2008; Stoeckl *et al*, 2007). With the newer SNS platforms - such as TikTok - the variety of accessible information creates an unstoppable stream of entertainment (Whiting and Williams, 2013). Such considerations imply:

**H1.** Passive consumptive behaviours will be more prominent than participatory or contributory behaviours amongst both pre-adolescent and adolescent consumers of TikTok.

**H2.** Consumers' need for affect/entertainment will have the biggest impact on their passive consumptive behaviours on the TikTok SNS site.

### ***SNS and participatory behaviours***

Participatory behaviours allow individuals to fulfil their need for social interaction (McKenna *et al.*, 2002) and constitute user-to-user interaction and user-to-content interaction (e.g. ranking the content, sharing and posting comments) and for individuals to maintain and/or build new relationships (Shao, 2009). The need to be connected to peers is the cornerstone of many SNS interface designs. In fact, many SNS sites have been created and predicated on the premise of social interaction, either with existing members of a social circle or connecting people with similar or shared interests (Boyd and Ellison, 2007; Raacke and Bonds-Raacke, 2008).

Relationship needs and gratifications can be met in different ways on platforms such as TikTok, but the consensus of the psychology literature indicates that SNS can fulfil much of the innate relational needs of adolescent individuals (Adelson, 1980; Buckingham, 2008; Mascheroni *et al.*, 2015), including the maintenance of current friendships and the building of new social networks (Dunne, *et al.*, 2010; Urista *et al.*, 2008). A number of network analyses have found that adolescents tended to communicate differently with close friends (strong ties) and with new social groups/networks (weak ties). Mobile phones (including text messages) were most often used to stay in touch with very close friends and family (Ishii, 2006), whereas social network sites were primarily used to connect with new social networks, weaker or “latent” ties (Boyd and Ellison, 2007; Van Cleemput, 2010). SNS is an avenue for the young to befriend new people and to connect with new social groups (Boyd and Ellison, 2007; Liu, 2009; Quan-Haase and Young, 2010; Tong *et al.*, 2008). This is especially the case for those who may be socially inhibited (Quan-Haase and Young, 2010) and for those who find comfort in an impersonal environment which offers shelter from real life rejections and embarrassments (Dunne *et al.*, 2010).



Allegedly, adolescents are dependent on making new social connections to maintain robust mental health and the consequences of not being able to build new social connections has been linked to low self-esteem, loneliness, and general psychological distress (Tanta et al., 2014). Although family relationships remain salient, the proportion of time that adolescents spend with persons outside of the family increases, and these extra-familial relationships serve many of the same functions that previously were considered the exclusive domain of family relationships during childhood (Collins and Laursen, 2004; Courtois et al., 2009; Tanta et al., 2014). The increasing time spent with friends at school, romantic interests, extra-familial adult mentors and significant others serve to accomplish the psychosocial tasks of independence and interdependence (Collins and Steinberg, 2007). Social networking sites provide the perfect environment for adolescents who are looking to expand their social networks quickly and with ease (Tanta et. al., 2014).

The above implies:

**H3.** Participatory behaviours will be more prominent amongst adolescent (as opposed to pre-adolescent) consumers of TikTok

**H4.** The gratification of relationship building (as opposed to relationship maintenance) will be (a) a stronger motivational driver amongst young consumers, and (b) more so amongst adolescent than pre-adolescent consumers.

### ***SNS and contributory behaviours***

In recent years, SNS has become a hotspot for production of content for many consumers, contributing to a shift where consumers now also take on a role as producers via the production of self-made content (Stoeckl, et. al., 2007). By doing so, they are contributing to the development and maintenance of these platforms and their content (Shao, 2009). A study conducted by August et. al. (2007) showed that 40 percent of consumers were actively

engaged in creating their own content online and young adults aged 13-24 were most likely to belong to a producing group (Shao, 2009). Adolescence brings about intense confusion in terms of social development (Odaci and Celik, 2017), and adolescents are intensively pre-occupied with their identity development and perform various identity experiments (Cook and Kaiser, 2004; Yau and Reich, 2018). Within the pre-adolescent and adolescent age bracket, the most cited motives for producing content was linked to needs of self-expression, social recognition and fame-seeking (Bargh, McKenna, and Fitzsimons, 2002; Dunne et al., 2010) which Shao (2009) defined as “working on one’s own identity and reflecting on one’s own personality” (Shao, 2009, p.14).

Self-expression refers to the expression of one’s own identity and individuality (Shao, 2009), and people have a need to present themselves to the outside world (Goffman, 1959).

Showcasing one’s talents on a site such as TikTok is a way of fulfilling this need and can help in the construction of certain impressions and images (Trammell and Keshelashvili, 2005; VanLear et al., 2005), with the aim of attracting the attention of audiences and to embark on new and/or supportive relationships (Walker, 2000). In the face of the process of identity construction and the importance of peer acceptance within the adolescence world, SNS and forums provide individuals with the possibility to modify their self-presentation (Bargh, McKenna, and Fitzsimons, 2002), to express hidden aspects of the self (McKenna and Bargh, 1998) and to act on the base of new identities (Gonzales and Hancock, 2008). Scholars of self-actualization and identity creation have alluded that this specific motivation is likely to be largely unconscious, but that nevertheless evidence existed to suggest that this underlying psychological motive was there and often triggered SNS production behaviours (McClelland, 2009). Since the online world is impersonal and vast, adolescents may have the perception that they can experiment more freely without the fear of rejection, face-to-face

encounters, humiliation or judgment by others (Odaci and Celik, 2017). Nevertheless, due to this vastness and large number of individuals online, it is difficult to stand out; it is not enough to only be a passive observer (Chen, 2016). For an individual to achieve social recognition (e.g. likes, visitors) some form of interactivity is required (Khan, 2017; Sheldon and Bryant, 2016). These factors in combination, means that there is a tendency for more individuals to digitally self-construct and produce content (Chen, 2016). A study found that adolescents preferred those SNS platforms which allowed them to construct visual identities; where definition of success was measured by social recognition and the number of followers and likes they had received (Mascheroni et. al., 2015; van Djick, 2013).

In addition to self-expression and social recognition seeking, the psychological motif of fame-seeking has also been found to trigger production behaviours on SNS platforms (Lease et al., 2002). Young people today are immersed in a world of celebrity (Chia et al., 2009), and research has attested to how reality television can cultivate a desire for fame in its audience and activated the use of SNS to pursue fame (Rui and Stefanone, 2016).

Adolescents today have the tools that grant them access to a virtual audience, and it may seem to them that fame is more realistic as a future goal to attain than in the case of their predecessors (Uhls and Greenfield, 2011). Studies show that during the past six decades the value of fame as an aspiration has increased from 4% to 40% among adolescents (Uhls and Greenfield, 2011). Social networking sites (TikTok in particular, as outlined previously) offer the potential for fame, which many of their consumers find attractive (Gentile et. al, 2012). For impressionable and younger people, celebrity fan pages can often provide the impetus to create similar profile pages that mimic the lifestyles of famous individuals; with the aim to increase popularity and to reach a high level of connectedness and acknowledgement. A quantitative analysis conducted by Uhls and Greenfield (2011) examining the value of fame

for pre-adolescents found that fame was the number one value for participants' and their goals for the future. Most of these young individuals use online video-sharing platforms to enact the value of fame (Uhls and Greenfield, 2011). Younger people spend a lot of time and energy working on increasing their social positions, and SNS helps to facilitate this through easy-access platforms (Dijkstra et. al., 2010; Lease et. al., 2002). The users, who succeed in attaining many followers and greater acknowledgement from their peers are considered "influencers", and thus, to be an influencer is considered a goal for many teenagers and young adults (van Djick, 2013).

Based on the above, the following hypotheses are proposed:

**H5.** Pre-adolescents' and adolescents' need for (a) self-expression, (b) social recognition and (c) fame-seeking will be the primary drivers behind the contributory behaviours associated with TikTok.

## **Method**

### ***Data collection***

TikTok is most popular among 11-16 year olds in Denmark, so this is the age group that was chosen for the purposes of the study. Since the consumers of TikTok in Denmark were expected to be spread across the country, multistage cluster sampling was employed. Multistage cluster sampling occurs within the probability sampling frame, which has the advantage that the researchers were closer to being able to generalize findings from the sample to the population. Cluster sampling was also deemed appropriate because the target population consisted of children, which also meant that gatekeepers such as parents and schools would be involved in providing permission before the researchers were able to reach the 11-16 year old participants needed for this study (Sargeant and Harcourt, 2012).

First, a total list of public and private schools in Denmark were obtained through the public website [www.skoleliste.eu](http://www.skoleliste.eu). The total list of schools was then divided into the five Danish regions: Capital Region, North Zealand Region, North Jutland Region, South Denmark Region and Mid-Jutland Region. Within each of the regions a random selection of 12 schools was made from the generated list, amounting to a total of 60 schools across Denmark, thus ensuring a wide representation of the Danish adolescent population within the relevant age group. Before contacting any of the schools in Denmark, advice from the National Children's Council (Børnerådet) was sought on how to contact and communicate with schools and children respectively. The initial email that was sent out to schools was written and sent by a special consultant and psychologist of the National Children's Council of Denmark.

Data was collected in the summer of 2019 and was open for two months after the final agreements with schools were made. An email was then sent to the 60 randomly selected schools with a cover letter explaining the study, as well as letters to parents separately. The cover letters served to comply with ethical considerations (i.e. not contacting students directly but instead seeking consent of participation from teachers and parents). The email was then followed up by phone calls to the schools, where agreements of participation were made. The respondent children were given the same amount of information about the study prior to participation (Sargeant and Harcourt, 2012). Seven out of the 60 contacted schools agreed to participate: 2 in the Capital Region, 1 in the South Denmark Region, 1 in the Zealand Region, 1 in the Mid-Jutland Region and 2 in North Jutland Region. Our research coincided with new school reforms in Denmark and a high number of accompanying mandatory national and regional studies done into the well-being of pupils across Denmark. Many of the sixty two per cent of non-respondents were reluctant to overburden their students with more survey-related obligations.

### ***Survey instrument and measures***

A survey was designed to measure the behaviour and gratification of Danish adolescent consumers of TikTok. The self-completion questionnaire utilised a 5 point Likert scale for the most part and some binary questions, in accordance with advice from advice from the National Children's Council (Børnerådet) (see above). The survey was created and administered through the online survey platform Qualtrics. It was divided into three parts, the first part consisting of socio-demographic profiling questions (including gender, age, regional location), followed by technology ownership and usage (including smartphone use, general social media use, TikTok usage and intensity of usage: "daily" to "rarely"). Respondents were then asked to answer seven binary (yes/no) questions based on Shao's (2009) usage behaviour classifications: (1) I use TikTok to watch my friends' videos/follow their profiles, (2) I use TikTok to view/follow others' profiles (other TikTok users, celebrities and idols), (3) I use TikTok to message/chat, (4) I like and share content on TikTok made by my friends, (5) I like and share content on TikTok made by others users (TikTok users, celebrities and idols), (6) I produce, edit and share my own videos on TikTok and (7) I engage in duets and collaborative videos with other TikTok consumers. Individuals who confirmed to be consumers of TikTok went on to complete questions in relation to the primary uses and gratification motivations (cognitive, affective, relationship maintenance/building, communication, self-expression, fame/recognition, identity-creation), see associated references to the constructs that were used and adapted in Table 1. Finally, participants were asked to reflect on and indicate the five most important motivations for using the TikTok application. The questionnaire used the standard procedures for content validity and used Brislin's (1970) back-translation method to ensure translation equivalence. This procedure along with the necessary pre-test modifications resulted in the final questionnaire.

## Results

Out of the initial 306 responses, almost 50% of participants reported not to use TikTok (non-users were slightly older and more likely to be male). Therefore, *actual* TikTok consumers within the sample accounted for 51% (n=159). At the time of the data collection, there were approximately 100.000 Danish TikTok users (2% of the entire Danish population). This figure has more than doubled a year later (Stoll, 2020). Out of the 100.000, 21% were teenagers. At the time of the study, the Danish population had 403,548 young people within the age ranges of 11-16, and TikTok was most popular amongst this age group.

The final sample of TikTok consumers consisted of 71.7% females and 28.3% males. The respondents were aged between 11-16, the majority falling into the 13-14 age bracket (42.1%). In terms of school years, the sample could be divided into pupils in Grade 6 (30.8%), Grade 7 (20.1%), Grade 8 (17.6%) and Grade 9 (31.4%) respectively. Although the sample is skewed in favour of girls, these statistics fit the findings on a global scale which shows that 36.6% of users are male and 63.4% female (Iqbal, 2020). Out of the 7 schools that agreed to participate in the survey, 2 were based in the Capital Region (11.9%), 2 in the North Jutland Region (18.9%), 1 in the Zealand Region (31.4%), one in Mid-Jutland Region (27.0%) and one in South Jutland Region (10.7%). All participants reported having either a smartphone or a tablet and used social media. Just over half of these TikTok consumers (52.2%) could be categorised as “heavy users”, engaging with the application on a daily basis; the rest of the 48% were classified as “light users”.

### *Test of hypotheses*

Passive consumptive behaviours were the most prominent forms of behaviour amongst both pre-adolescent and adolescent consumers of TikTok (74.1% passive consumptive behaviour as opposed to 42.2% participatory and 32.6% contributory behaviours on aggregate [confirming H1]). Gratification of entertainment/affect was the key driver behind passive consumption (confirming H2), but also participatory and contributory behaviours. Indeed, the overall gratifications that were sought from the use of TikTok were mostly associated with affective needs (74.7%), escapism (50.6%), cognitive needs (44.3%) and the surveillance of others (43.7%); no discernible differences were found in relation to these matters across gender, age, region, or user intensity. H3-H4(a) and H4(b) could not be confirmed, because there were no significant differences between how the two groups participated on TikTok. The gratification of relationship building was a stronger motivational driver than relationship maintenance amongst both pre-adolescent and adolescent consumers. Individuals who used the participatory functions of TikTok, used it specifically to like and share the content of “others”/new social networks (71.1%) rather than liking and sharing content of existing networks (46.6%). The gratifications sought via the participatory function were primarily to do with affect/entertainment, but also with identity-creation, social recognition and the desire to expand one’s social network (see Table 2 for details). H5(a) H6(b) and H6(c) were only partially confirmed. Needs for (a) self-expression, (b) social recognition and (c) fame-seeking were important drivers behind the contributory behaviours associated with TikTok, but affect/entertainment seeking seemed to be even more important to both groups than the aforementioned psycho-social drivers.

### *Additional findings*

Contributory behaviours were pursued by 32.6% of the sample (42.1% produced personal videos, 22.6% also collaborated with others to produce content). Almost a third of all those



who used TikTok for contributory purposes claimed that they did so for exhibiting their creativity, self-expression and for experimenting with their identity. Those who were interested in becoming famous were heavier users of TikTok ( $F=4.589$ ,  $sig.=0.012$ ).

Although not hypothesised, pre-adolescents produced more than did the adolescent groups ( $F=15.818$ ,  $sig.=0.003$ ). The data on contributory activities suggested that (a) the motivations for satisfying components of self-expression ( $F=5.206$ ,  $sig.=0.006$ ), showcasing talent ( $F=10.145$ ,  $sig.=0.000$ ), identity-creation ( $F=7.454$ ,  $sig.=0.001$ ), fame-seeking ( $F=5.829$ ,  $sig.=0.004$ ), affect ( $F=9.226$ ,  $sig.=0.000$ ), relationship maintenance ( $F=4.560$ ,  $sig.=0.013$ ) and relationship building ( $F=5.509$ ,  $sig.=0.005$ ) were important gratifications to all those who produced content, but, also that (b) all these needs were significantly heightened as one reached adolescence. Although not many individuals engaged in the production of duets and collaborative videos, those individuals that did engage were “even more serious” about needing praise, recognition and aspiring to become famous. Interestingly, pre-adolescent groups were significantly more likely to keep a close eye on and follow the profiles of friends ( $F=7.209$ ,  $sig.=0.001$ ) and were significantly more likely to be gratified by these activities in terms of affect ( $F=4.327$ ,  $sig.=0.012$ ) and cognition ( $F=6.328$ ,  $sig.=0.02$ ) than were adolescent groups. Children aged 13 and above were more likely to have their cognitive ( $F=2.160$ ,  $sig.=0.016$ ), and affective ( $F=4.327$ ,  $sig.=0.015$ ) needs met by the passive consumption of content posted by significant others (influencers, celebrities and idols).

Although not hypothesised, significant regional differences were found amongst the sample data. A two-step cluster analysis using the log-likelihood measure was conducted and deemed most appropriate, allowing the formation of clusters based on both continuous and categorical data (Norusis, 2012). Forming clusters hierarchically allowed the exploration of a range of solutions with different numbers of clusters (Norusis, 2012); these clusters were then reduced

to the best number of clusters on the basis of Schwarz's Bayesian information criterion (BIC). A four-cluster solution emerged. Cluster 1 was labelled *pre-adolescent all-rounders*: this cluster contained heavy-users, primarily pre-adolescent individuals (n=46) who were most likely to be from the North Jutland region. A second cluster comprised mostly 13-14 years olds (n=39) who also tended to be from North Jutland, but characterised by and labelled as *new social network focused* even when it came to the contributory features of Tiktok: building new friendships was the priority motivation. Clusters 3 (n=41) and 4 (n=32) contained the oldest age categories (15-16 year olds). Cluster 3 was labelled *celebrity/fame-seekers*, most likely to be from the Zealand and Mid-Jutland regions, but interested mainly in activities that involved content created by celebrities/idols and producing videos for identity-creation and fame-seeking purposes. Cluster 4 was labelled *shy addicts*. They comprised the heaviest and oldest users, mostly from the Central Jutland Region who did not use the contributory functions of TikTok. Seemingly, the older a person becomes, the more likely the individual shies away from production. This may be due to adolescent self-consciousness but also alertness to privacy concerns. The cluster analysis suggested that individuals who lived in the most rural and the most densely populated areas were the least likely to seek fame and social recognition on this particular SNS.

## **Discussion and Conclusion**

Most of the study's assertions were confirmed and additional novel insights uncovered. The findings suggested that pre-adolescent girls were the heaviest users of TikTok within a sample of 11-16 year old children living in Denmark who partook in passive consumptive, participatory and contributory behaviours. Passive consumptive behaviours constituted by far the most likely behaviours in both pre- and adolescence groups, and confirmed the findings of previous research that found that passive SNS usage was directly linked to entertainment,

and fun. In fact, the gratification of affect/entertainment was the primary motivation behind all three forms of behaviour, confirming Omar and Dequan's (2020) findings that motives across the three usage behaviours can overlap; and thus contradicting Dolan et al.'s (2019) assertions that entertainment seeking cannot fulfil or impact active (rather than passive) behaviours on SNS.

As hypothesised, adolescents were clearly using TikTok to engage in those activities that helped them build new social networks (Shao, 2009), confirming Tanta et al.'s (2014) and Urista et al.'s (2018) assertions that early adolescent consumers were especially concerned with the expansion of such networks, as they began to understand themselves as social individuals, and began forming their identities. A novel insight of this study was that pre-adolescents (although *still* more focused on engaging with current friendship groups than adolescents), were also seeking out new friends and networks on TikTok in the same way that adolescents were.

The finding that pre-adolescence were more active than adolescents on TikTok, may be of concern in light of the requirements that consumers be at least 13 years old to utilise the full TikTok experience, unless they get permission and approval from parents or guardians who can set up an account on their behalf. Common Sense Media, a popular and credible free online resource for parents and educators, recommends that the TikTok platform is used by adolescent who are 15 years old or older, mainly due to privacy issues and potential mature content available on the application (Murphey, 2019). Reports have surfaced that the moderation of content and associated networks is slack and a danger to child safety. For instance, research by the charity NSPCC in the UK has found that a quarter of 40,000 children (7-16 years old) have livestreamed online with individuals that they had never met, and one in 20 children had been sent intrusive messages and asked to do inappropriate things

(Hern, 2019). The fact that very young user groups are accessing SNS sites such as TikTok may also mean that children are growing up faster and are engaging and mimicking adolescent type behaviours at an even earlier age, but without the right know-how on how to navigate SNS safely.

Although more pre-adolescents produced content via TikTok, older adolescent members of the sample who reported being active in producing videos were significantly more likely to agree that they did so to fulfil needs for praise and social recognition as well as self-identity creation and fame-seeking desires, plus relationship maintenance and building. Indeed, one of the novel and important findings of our study was that *both* the relationship building and the relationship maintenance needs were sought to be satisfied via the production function of TikTok (rather than the participatory function): individuals produced videos to get reactions, praise and recognition. Mascheroni et. al. (2015) argued that adolescents use SNS to present themselves and to display their online identities, and that those SNS that encouraged visual representations – such as TikTok - were the most popular. Production was more likely to mean a higher number of received likes, and ultimately, a higher probability that content would go “viral” (Khan, 2017; Sheldon and Bryant, 2016). These findings confirm that the development of identities (Buckingham, 2008; Yau and Reich, 2018) and the strengthening of social positions (Dijkstra et. al., 2010; Lease et. al., 2002; Shao, 2009) became increasingly important as individuals reached adolescence.

### **Managerial implications**

Although we may conclude that Tiktok is light-hearted fun, and therefore nothing to concern ourselves about, the fact that many young TikTok consumers are actively seeking out new

external networks for the purposes of becoming more popular and famous, may be of concern. Effort needs to be made to find out who the influential TikTok figures are and the types of content they post online.

Individuals who engaged at the contributory level tended to be heavy users: for these consumers the application suddenly became serious fun and the gratifications of self-expression, identity-creation and fame-seeking were shown to be the most important gratifications sought. Experimenting online with one's identity at such a young vulnerable age may cause concern amongst parents and schools. The site is not monitored as closely by the parent company as one would hope and young children may be at risk of exposing themselves to unwanted attention; there is a danger that young people (especially the pre-adolescent) will engage in production of videos that guardians and parents do not know about, would not consent to, and that the creator behind the self-made video may live to regret. There is therefore a real need for educators and guardians to step in and start the education of online dangers and harm at an even earlier age than is currently the case. This recommendation is with respect to not just privacy issues, stranger danger, but also the management of expectations of becoming famous, and how online friendships may be very different from real ones. The seeking out of online friendships by adolescent groups may also be a concern to parents and guardians. Caution needs to be exercised at all levels, especially when such young people are involved. Nevertheless, Creswick et al. (2019) cautioned, that updating terms and conditions to social media platforms must also incorporate the views of the young people themselves.

It is interesting that the regions of two extremes (Capital region [most urban] and Nord-Jutland [most rural]) were most similar in terms of how they engaged with TikTok (less

actively and less seriously). The Capital region has the highest population density, the most cultural offerings, whereas the Nord-Jutland region has the least of both of these amongst the five key administrative regions. Individuals in the Capital live in close proximity to celebrities and fame, have many opportunities for recreational activities, perhaps feel that they are accomplishing things, and gaining recognition from peers in real life. As a result, they may not feel the need to seek out the TikTok social space to prove themselves.

Individuals in North-Jutland, primarily a rural region, may have a different lifestyle, where the focus is on being active outside; perhaps the competition for fame is far removed from an adolescent growing up in these circumstances. More research is needed into these fascinating findings.

### **Limitations and recommendations for future research**

This study had a number of limitations. First, there is the issue of sample size, where a marginally smaller sample than expected was available for study and a certain amount of sampling error must be expected, due to 53 of the initially contacted schools who declined to participate. Nevertheless, every attempt was made to reach out to the entire school population of Denmark using stratified random sampling procedures. Although the results may not be generalizable across the entire adolescent population, the sampling procedures employed were designed to make sure the findings are as generalizable to the Danish adolescent population as possible. Furthermore, the final sample (after the removal of non-users) was skewed in favour of girls (71%) which (although representative of TikTok consumption and use at the time of data collection) meant that no meaningful differences could be ascertained in relation to gender.

Caution needs to be exercised in relation to generalising across adolescent populations. Social and cultural norms and values play a large part in the engrained attitudes and behaviours of certain nations. Allegedly the Nordic notion of the Law of Jante is still a strong force in Denmark resident's outlooks on life, which subscribes to "modest behaviours" whilst avoiding the envy of others. According to this deep-rooted tradition, arrogance is considered equal to misfortune (Cappelen and Dahlberg, 2017). Such values at societal levels may have an impact on the use and engagement with certain types of social media platform such as TikTok where the onus is very much on the individual showing off in some shape or form. It may be interesting to do a cross-comparative study of countries where these norms and attitudes are markedly different (for example the USA). Researchers also need to be mindful of the potential regional differences within countries (rural versus urban) as was found in this study.

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**TABLE 1.**

<b>Behavioural Category</b>	<b>Needs and gratifications sought</b>	<b>Authors</b>
<b>Passive consumptive</b>	Surveillance needs	Whiting & Williams, 2013; Shao, 2009.
	Cognitive needs/information	de Vries et al., 2012; Dolan et al., 2017; Muntinga et al. 2011; Park et al., 2009; Whiting & Williams, 2013.
	Relaxation	Quan-Haase & Young, 2010; Whiting & Williams, 2013.
	Affective needs/ entertainment & fun	Azar et al., 2016; Courtois et al, 2009; Muntinga et al., 2011; Stoeckl et al., 2007; Tafesse, 2015
<b>Participatory</b>	Social interaction (communication needs)	de Vries and Carlson, 2014; Jahn and Kunz, 2012; Muntinga et al., 2011; Shao, 2009; Urista et al., 2008; Whiting & Williams, 2013.
	Relationship maintenance (friends/family)	Park et al., 2009; Urista et al., 2008; Whiting & Williams, 2013.
	Relationship building (networking, new friends)	Urista et al., 2008; Whiting & Williams, 2013.
<b>Contributory</b>	Self-expression needs	Chen, 2016; Halliday, 2016; Shao, 2009; Stoeckl et al, 2007.

Identity-creation needs	Gentile et al, 2012; Mascheroni et al, 2015; van Djick, 2013;
Fame, praise & recognition needs	Halliday, 2016; Shao, 2009; Stoeckl et al, 2007.

**TABLE 2.**  
**GRATIFICATIONS SOUGHTS WITHIN PASSIVE CONSUMPTIVE, PARTICIPATORY AND CONTRIBUTORY BEHAVIOURS (BY AGE GROUP)**

Specific motives behind the 3 behaviours	Age (11-12)	Age (13-14)	Age (15-16)	ANOVA	
	Mean	Mean	Mean	F	P
<b>Passive consumptive behaviour (current social networks)</b>					
I get to know what my friends are doing (surveillance)	3.04	2.23	2.05	9.234	0.000
I get inspiration for my own life	2.35	1.88	1.98	2.479	0.087
It is fun and entertaining (affective need)	3.61	2.88	2.68	4.560	0.012
I obtain new information new knowledge and information (e.g. about events or new music) (cognitive need)	3.12	2.29	2.22	6.238	0.002
I can compare myself to my friends	2.47	1.89	1.90	4.220	0.016
I can keep up to date on new trends	3.10	2.45	2.44	3.200	0.04
I can see what my friends are commenting on and what they like	3.27	2.39	2.27	7.647	0.001
I learn new skills (e.g. putting on make-up, play a game, dancing, making jewellery, football tricks)	3.08	2.39	2.20	5.248	0.006
I think it is relaxing to look at my friends' videos and profiles	3.04	2.50	2.41	2.661	0.073

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**Passive consumptive behaviour (other networks: influencers, celebrities and idols)**

I get to know what my idols are doing (surveillance)	2.76	2.76	2.76	0.001	0.999
I get inspiration for my own life	2.14	2.47	2.71	2.514	0.084
It is fun and entertaining (affective need)	3.31	3.58	4.17	4.327	0.015
I obtain new information new knowledge and information (e.g. about events or new music)	2.82	2.98	3.44	2.160	0.016
I can compare myself to celebrities/my idols	2.18	2.17	2.46	1.045	0.354
I can keep up to date on new trends	2.94	2.94	3.63	3.880	0.023
I can see what celebrities and my idols are commenting on and what they like	2.88	2.86	2.90	0.011	0.989
I learn new skills (e.g. putting on make-up, play a game, dancing, making jewellery, football tricks)	2.57	2.83	2.93	0.885	0.415
I think it is relaxing to look at my idols' and celebrities' videos and profiles	3.08	3.05	3.68	3.019	0.052

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**Participatory behaviour**

I can communicate with my friends	1.25	1.23	1.10	0.516	0.598
I can build, meet and get new friends	1.22	1.26	1.17	0.151	0.860
I can communicate with family	1.22	1.18	1.10	0.365	0.701
I can communicate a common message to all friends and family	1.24	1.21	1.10	0.451	0.638
I share my friends' content because I want to strengthen our friendship	2.20	1.65	1.63	4.059	0.019



I share my friends' content because it increases the chance of them sharing my content	1.76	1.50	1.68	1.015	0.365
I share my friends' content because I think they are talented and fun	2.47	1.92	1.98	2.305	0.103
I share my friends' content to become more popular with my friends	1.61	1.35	1.68	1.723	0.182
I share my friends' content so we have something to talk about in school or in our spare time	1.98	1.64	1.73	1.288	0.279
I share the content of others because I want to be associated with them	3.06	3.47	3.29	1.135	0.324
I share the content of others because it increases the chance of them noticing me	3.00	3.332	3.27	0.629	0.534
I share the content of others because I think they are talented and or fun	3.94	4.08	4.27	1.029	0.360
I share other people's content to get more likes and followers on my own profile	3.10	3.27	3.29	0.216	0.806

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### **Contributory behaviour**

I produce and share my own content because it allows me to express who I am	3.86	4.55	4.37	5.206	0.006
I produce and share my own content because I want to showcase my talents	3.69	4.59	4.41	10.14 5	0.000
I produce and share my own content so I can provide others with knowledge and inspiration	3.76	4.08	4.27	7.891	0.001
I produce and share my own content so I can get more followers	3.76	4.61	4.32	2.699	0.070
I produce and share my own content to become more popular with my friends	3.57	4.30	4.29	4.507	0.013

I produce and share my own content because I want to be famous	3.73	4.47	4.44	5.829	0.004
I produce and share my own content because I think it is fun	4.12	4.73	4.73	9.226	0.000
I produce and share my own content to make more friends	3.94	4.08	4.27	5.509	0.005
I produce and share my own content because it helps figure out who I am	3.49	4.42	4.22	7.454	0.001
I produce and share my own content because I want to express myself creatively	3.82	4.61	4.46	9.149	0.000
I produce and share content because I want praise and recognition from other users and from my friends.	3.75	4.41	4.39	4.786	0.010
I collaborate (e.g. do duets) with other TikTok users to get more followers to my own profile.	4.29	4.61	4.73	2.272	0.107
I collaborate (e.g. do duets) with other TikTok users to showcase my talent	4.29	4.62	4.85	3.921	0.022
I collaborate (e.g. do duets) with other TikTok users because it increases the chance that I get noticed	4.35	4.64	4.78	2.382	0.096
I collaborate (e.g. do duets) with other TikTok users because I want to become famous	4.29	4.62	4.76	2.662	0.073
I collaborate (e.g. do duets) with other TikTok users to get praise and recognition from other users	4.37	4.59	4.78	1.870	0.158
I collaborate (e.g. do duets) with other TikTok users because it is fun	4.59	4.82	4.83	1.886	0.155