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Addictive symptoms of mukbang watching: A qualitative interview study using directed content analysis

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ABSTRACT

Mukbang watching (i.e., watching eating broadcasts) is an emerging online behaviour that has recently gained popularity. Although, there are a number of positive impacts of recreational mukbang watching (e.g., helping overcome loneliness), for a minority of individuals, excessive mukbang watching may turn into problematic (i.e., addictive) mukbang watching and lead to negative consequences. The present study investigated the addictive symptoms of mukbang watching using a qualitative design. The study attempted to determine the addictive symptoms of mukbang watching through semi-structured interviews with a sample of eight mukbang viewers who frequently watched mukbang. Directed content analysis was used to analyse the data. Nine key themes were explored comprising preoccupation, withdrawal, tolerance, inability to stop, loss of interest, continuing despite problems, deceiving family/friends, relieving negative mood, and risking relationships. Findings of the present study concur with those of previous survey research suggesting that mukbang watching may be another online addictive behaviour that can result in adverse consequences for individuals' mental, social, and physical health.

Introduction

With the fast development and adoption of internet and smartphone technologies, increasing numbers of individuals worldwide engage in online daily activities (e.g., shopping, gambling, social networking). One such growing activity is watching *mukbang* (i.e., eating broadcasts) where *mukbangers* (i.e., individuals in the broadcasts) eat a large portion of food while interacting with the viewers (Choe, 2019). The origin of mukbang dates back to 2009 in South Korea and became widespread in Western countries by 2014 (Donnar, 2017), although mukbang watching has not been adequately studied empirically. Nevertheless, mukbang watching is now a popular online activity that attracts hundreds of thousands of daily internet users worldwide (Kang et al., 2021; Nam and Jung, 2021; Stein and Yeo, 2021).

Several studies have concluded that mukbang watching might have negative consequences for the viewers including (i) increased consumption of food because of social comparison or mimicry, (ii) alteration of viewers' perception of food consumption and thinness, eating, health, table manners, and eating manners because of modelling of bad behaviours, and (iii) obesity and different eating disorders because of the glorification of binge eating (Bruno and Chung, 2017; Donnar, 2017;

Hong and Park, 2018; Spence et al., 2019). It has also been claimed that mukbang watching may also become addictive for a minority of people who use mukbang watching as a form of social compensation (Kircaburun et al., 2022a).

A growing body of cross-sectional research has demonstrated that mukbang watching may be another technology-related addictive behaviour. A study with 222 university students showed that personality traits (i.e. conscientiousness, sadism, extroversion) and procrastination were positively related to addictive mukbang watching (Kircaburun et al., 2022a). Among a total of 170 emerging adults, path analysis indicated that eating gratification (e.g., watching mukbang to satisfy eating needs) but not social gratification (e.g., watching mukbang to satisfy social interaction needs) was positively associated with addictive mukbang watching (Kircaburun et al., 2022b). A structural equation modelling study comprising 140 emerging adults indicated that addictive mukbang watching was positively associated both with internet addiction and disordered eating (Kircaburun et al., 2021a). An online survey study comprising 217 university student mukbang viewers found that addictive mukbang watching was positively associated with loneliness and *YouTube* addiction (Kircaburun et al., 2021b). All the aforementioned studies suggest preliminary empirical evidence for the

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possible existence of addictive mukbang watching among a small group of individuals.

However, these studies used the same psychometric tool to assess addictive mukbang watching (i.e., the Mukbang Addiction Scale [MAS]; Kircaburun et al., (2021c)). The MAS was developed with 236 university students from a single country based on the components model of addiction (Griffiths, 2005). Therefore, the MAS was validated in only one country and with a small number of participants. In order to overcome these limitations, studies that extend the preliminary findings of the aforementioned studies should use more in-depth methodologies to confirm that addictive mukbang watching may actually exist among mukbang watchers.

Consequently, the present study examined symptoms of addictive mukbang watching by using official diagnostic criteria of a behavioural addiction (in this case internet gaming disorder [IGD]) as a ‘blueprint’. The American Psychiatric Association (APA) introduced IGD as a tentative disorder in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) in 2013. IGD was defined as “persistent and recurrent use of the internet to engage in games, often with other players, leading to clinically significant impairment or distress” (APA, 2013). According to the APA, an individual should endorse five out of nine symptoms over a 12-month period (APA, 2013). These symptoms include (i) being excessively preoccupied with gaming, (ii) having withdrawal symptoms when not gaming, (iii) spending more and more time gaming, (iv) failed attempts to reduce or quit gaming, (v) losing interest in other hobbies apart from gaming, (vi) engaging in gaming despite its adverse consequences, (vii) deceiving others about gaming duration, (viii) achieving a positive mood by gaming, and (ix) risking, jeopardising, or losing a job or relationship because of gaming (APA, 2013). These official symptoms of gaming disorder has been adapted to assess other technology-related behavioural addictions (e.g., social media disorder [Van den Eijnden et al., 2016], internet use disorder [Islam et al., 2020]). The present study adapted the DSM-5 gaming disorder symptoms to assess addictive mukbang watching instead of using the items of MAS.

The diagnostic criteria for IGD were developed along the lines of those for substance addictions and gambling. The parallels between the phenomenology of substance addictions and behavioral ones has also substantiated by empirical research (Di Carlo et al., 2023). In short, these criteria are based on general addiction criteria for other substance and behavioral addictions. The criteria for gaming disorder are well-established and widely recognized within the field of psychology and psychiatry. By applying these criteria, researchers can leverage existing knowledge and frameworks to understand addictive behaviors, even if they manifest in different contexts such as mukbang addiction. Gaming disorder criteria offer a specific set of symptoms and diagnostic guidelines that can provide clarity and precision in identifying addictive behaviors (Van den Eijnden et al., 2016). Overall, using gaming disorder criteria to investigate mukbang addiction offers several benefits in terms of clarity, comparability, and leveraging existing knowledge and frameworks.

A qualitative design was used to obtain deeper understanding of addictive mukbang watching symptomatology. Previous studies have used qualitative methods to investigate different technology-related behavioural addictions including television binge-watching, online video watching addiction, and smartphone addiction (Jameel et al., 2019; Yang et al., 2021). For instance, content analysis of interviews with a focus group of seven regular television series viewers concluded that television series watching can become addictive with similarities to psychoactive substance addiction criteria and symptoms (Flayelle et al., 2017).

Another study by Jameel et al. (2019), using directed content analysis, applied the components model of addiction (Griffiths, 2005) during interviews with 40 college students. It was concluded that there was evidence of smartphone addiction by identifying addiction components such as salience, tolerance, withdrawal, and conflict (Jameel et al.,

2019). A thematic analysis study by Yang et al. (2021) with 20 young Chinese adults reported eight themes relating to watching online videos, one of which was addiction-like symptoms. The authors concluded that specific video content (e.g., mukbang, pornography), platform-driven continuous watching, and short-form videos were potentially addictive. Given the reliance on purely quantitative methodologies in previous studies examining mukbang watching addiction, the present study investigated addictive mukbang watching through interviews by applying directed content analysis by adapting the official DSM-5 criteria for gaming disorder.

Mukbang is an under-researched area, and the research to date has mainly used quantitative methodologies. Where an area is under-researched and where little is known, then it is appropriate to use qualitative analysis in order to have a better understanding to identify specific areas to investigate further in future research. Employing a qualitative design could result in valuable insight above and beyond to what has been reported to date. As far as the present authors are aware, there have been no prior studies taking a qualitative approach to explore mukbang and problematic use of mukbang. Therefore, the present study is a novel study in which qualitative methodology is considered appropriate to support understanding in a greater depth. The present study sought to investigate nine addictive indicators associated with mukbang viewing through the application of a qualitative research approach.

Methods

Participants and procedure

The sample comprised eight regular mukbang viewers (five females) whose ages ranged between 21 and 33 years ($M_{age} = 26.62$ years; $SD_{age} = 1.04$). Six of the participants were from South Africa whereas the other two were from the UK and USA. The demographic characteristics of the participants are shown in Table 1. The recruitment of the participants was through crowdsourcing platform, *Prolific.co*. Individuals who obtained exceptionally high scores on the Mukbang Addiction Scale in a prior study by the authors were contacted and offered the opportunity to participate in a follow-up interview study. Each participant received £10 for taking part in the study. Participants acknowledged that participation was voluntary and anonymous, and gave their informed consent before participation. Approval for the study was received from the research team’s university ethics committee and complied with the Helsinki Declaration.

Measures

A semi-structured interview was employed to examine participants’ mukbang watching behaviors and addictive symptoms. The open-ended questions specifically focused on addictive symptoms related to mukbang viewing (see Appendix for the interview questions asked). The questions in the interview guide were theoretically based, following Krueger and Casey (2014) framework where the introductory questions were more general aiming to explore the participant’s mukbang behaviour. In order to assess whether symptoms of addiction were

Table 1
Demographic characteristics of participants ($N = 8$).

Participant	Gender	Age	Country
P1	Male	26	South Africa
P2	Female	21	South Africa
P3	Female	30	USA
P4	Female	27	South Africa
P5	Male	33	UK
P6	Male	25	South Africa
P7	Female	24	South Africa
P8	Female	27	South Africa

present among mukbang watchers, an interview guide with open-ended questions was created assessing each of the symptoms used in the official diagnostic criteria of gaming disorder in the DSM-5 (APA, 2013) to ensure that there was consistency in each interview while allowing for any topics considered to be important to the participants to be covered. Semi-structured interviews were conducted to ensure consistency across all interviews while enabling flexibility (Robinson, 2014). The questions were formulated for the present study by the researchers using the aforementioned criteria, aiming to assess addictive mukbang watching.

The possible symptoms of addictive mukbang watching that were investigated comprised (i) preoccupation with mukbang watching (e.g., individuals constantly watching mukbang, when not watching mukbang individuals fantasising about watching mukbang, thinking about previous mukbang videos that they watched, and/or anticipating the next time they will watch mukbang), (ii) withdrawal symptoms when unable to engage in mukbang watching (e.g., feeling restless, irritable, anxious, and/or sad if unable to watch mukbang or watch mukbang less than usual), (iii) tolerance (e.g., an increase in mukbang watching over time), (iv) inability to quit and/or reduce the time spent on mukbang watching (e.g., individuals trying to reduce the time spent watching mukbang or trying to quit watching mukbang but failing), (v) loss of interest in other hobbies due to mukbang watching (e.g., individuals preferring to watch mukbang rather than meeting their friends or participating in hobbies and pastimes that they used to enjoy before), (vi) continuing to watch mukbang despite problems (e.g., individuals losing sleep, having arguments with and family or friends, neglecting important duties because of mukbang watching), (vii) deceiving family/friends about mukbang watching (e.g., not letting others know how much time is actually spent watching mukbang or lying about their mukbang watching.), (viii) positive mood modification through mukbang watching (e.g., watching mukbang to relieve a negative mood state such as helplessness, guilt, or anxiety), and (ix) risking relationships/jobs due to mukbang watching (e.g., losing a significant relationship because of mukbang watching, jeopardising educational and/or occupational duties). Interviews were carried out and transcribed by the first author to support familiarisation of the dataset prior to coding Table 2.

Data analysis

Directed content analysis was chosen as the method to analyse the qualitative data to better understand the investigated phenomenon (Downe-Wambolt, 1992). Qualitative content analysis has been defined as a research method for subjective interpretation of the content of text data through a process of coding and systematic classification to identify themes or patterns (Hsieh and Shannon, 2005). Directed content analysis was used because this method aims to validate or extend a theoretical framework or theory (Hsieh and Shannon, 2005).

In the directed content analysis method, the text data are analysed by following the deductive use of theory (Hickey and Kipping, 1996; Potter and Levine-Donnerstein, 1999). First, all transcripts were coded into broad categories on the basis of predetermined categories of addictive mukbang watching criteria. After coding, the data were examined for each category to determine whether subcategories were needed for that category. Common concepts, which emerged in the focused interview questions, were identified as themes. An iterative process was used in which transcripts were coded and recoded until no new themes or addiction symptoms emerged. Data that could not be coded into one of the nine DSM-5 criteria were re-examined to describe different manifestations, which were then subsumed within one of the nine key themes if found related to some extent. In the final stage, the themes for the study as a whole were established. All quotes have a unique identifier (e.g., P2, F21 means ‘Participant 2, female aged 21 years).

Table 2

Key themes.

Theme number	Theme	Theme description	Theme results
1	Preoccupation	Preoccupation with mukbang watching	Participants, when they are not watching mukbang, spend time thinking about the previously watched mukbang videos and anticipating what the content of the next video will be.
2	Withdrawal	Adverse health symptoms as a result of not being able to watch mukbang	Participants feel anger, frustration, sadness, stress, and anxiety when they are unable to watch mukbang.
3	Tolerance	Elevated amount of time spent on watching mukbang to feel satisfied	Participants spend more and more time on watching mukbang in order to feel satisfied.
4	Inability to stop	Failed attempts to quit/reduce mukbang watching	Participants cannot fully stop watching mukbang even if they try to quit. Even when they attempt to reduce the daily time spent on watching mukbang they fail.
5	Loss of interest	Quitting previous hobbies due to mukbang watching urges	Participants have lost interest in engaging in their hobbies including reading, watching movies, going outside because of their desire to watch more mukbang.
6	Continuing despite problems	Resuming mukbang watching despite having problems	Participants keep watching mukbang even though they experience work/education/relationship/sleep problems because of excessive mukbang watching.
7	Deceiving family/friends	Lying about and/or hiding mukbang watching behaviour	Participants have to lie to their loved ones in order to hide how much time they spent on watching mukbang.
8	Relieving negative mood	Using mukbang watching for positive mood modification	Watching mukbang can transform negative feelings into positive ones for some of the participants.
9	Risking relationships	Risking relationships due to mukbang watching	Participants jeopardize their relationship with family and friends as a result of their engagement in excessive mukbang watching.

Results

Key theme 1 – Preoccupation (salience)

The importance of watching mukbang in the lives and minds of individuals was highlighted in this theme. Key themes and sub-themes are listed in Table 3. This key theme of the participants’ thinking about watching mukbang in their daily lives comprised two sub-themes: *problems* and *reflections on daily life*. Four of the participants stated that they thought of mukbang videos even when they were not watching mukbang videos. One of the participants explained that even if she was

Table 3
Summary of key themes and sub-themes.

Key theme	Sub-themes
Preoccupation	Problems Reflections on daily life
Withdrawal	Feelings From past to future
Tolerance	Time-related Content-related
Inability to stop	Feelings Behaviours
Loss of interest	Control Change
Continuing despite problems	Health-related problems Task-related problems
Deceiving family/friends	Reasons Coping strategies
Relieving negative mood	Before After
Risking relationships	Friends Family

in a serious conversation with someone, she could not focus on the conversation and continued to think about the mukbang videos she watched:

"I usually do a schedule on when I will watch the mukbang videos. So when I'm doing something, especially if the time is close for me to watch them, the mukbang videos, I cannot focus. I'm only thinking about it. Someone could be talking to you, speaking to you about something serious...all you are thinking about is the mukbang video that you watched. Every sound, every gesture that they were doing is like replaying in your mind" (P2, F21).

One of the participants stated that she planned to repeat what she watched in mukbang videos while shopping for food or eating at home:

"Mostly [I think about mukbang] when I go to a restaurant or one of these fast food outlets, and then I buy the food and while I'm eating it...when I go to purchase food at a supermarket and then when I get home, I actually want to start repeating what the guys in the mukbang videos do" (P8, F27).

Key theme 2 – Withdrawal

In the 'withdrawal' key theme, what the participants thought and how they felt when they could not watch mukbang were highlighted. Sub-themes within this key theme are presented in Table 3. These were feelings (emotions) and what they felt from the past to the future. When the general views of the eight participants were examined, they felt anxiety, anger, sadness, frustration, disappointment, longing, and envy when they could not watch mukbang. One of the participants stated that he got angry when he could not watch mukbang:

"When I haven't watched it, if, I'm too busy to watch it, then I feel angry, I feel frustrated, I feel some sort of anxiety because I want to watch it. It's something that I feel like I have to do...Yes, I must watch it. If I don't watch it, then I won't be all right. I won't be okay" (P1, M26)

One of the participants said that if she missed watching mukbang videos because she was travelling, she was envious of the times she could watch mukbang:

"Especially when I'm traveling, it's difficult for me to watch mukbang. In most cases, my job wants me to be traveling from time to time. So, I cannot really have much time to watch it so I feel envy and wish I was [watching mukbang]" (P4, F27).

According to the opinions of five participants, not being able to watch mukbang caused completely negative emotions. Moreover, two participants watched mukbang to get rid of negative emotions. In this

respect, they were negatively affected in different ways when they could not watch the videos due to reasons such as being busy with other jobs and having internet access problems.

Key theme 3 – Tolerance

In this key theme, the opinions of the participants about how long they watched mukbang were included. The sub-themes within the 'tolerance' key theme are presented in Table 3. Within this key theme, the opinions of the participants on why they developed tolerance comprised two sub-themes: *time* and *content*. All of the participants stated that when they first started watching mukbang, they watched less than they did now, and the time spent watching mukbang had gradually increased. Two participants thought that the increase in the amount of time they watched mukbang was related to the increasing content density over time. The diversification and increase of watching mukbang videos, which are mostly watched on YouTube, seems to have attracted increased attention from the watching audience.

Similarly, one of the participants stated that she enjoyed watching mukbang videos that included different foods or different eating styles (P8). Naturally, she watched mukbang more than before because the transition from one video to another video was more exciting and interesting in this discovery process:

"I would actually watch it for more hours than I usually watched it for. I actually wanted to watch it for a longer period...Way back, there were not a lot of mukbang users. So, now that there's different kinds and there's different cultures involved. People exploring different foods and the way they cook it, I watch it way more. Back then, I used to watch it less than that because there wasn't much to see. People were not really exploring with different kinds of food and most of them eat crazy things these days... Back then they never used to eat crazy, they used to eat the normal food that we usually eat. So, now it's more interesting because people are willing to explore anything" (P8, F27).

One of the participants stated that when he watched short mukbang videos, he watched them over and over again to fill the time and get satisfaction (P1). In this context, it appears that the participant actually started with shorter videos at first and realised that he became addicted by observing that the time he watched increased over time.

"If I watch shorter videos, I have to watch multiple [videos] to actually try and fill in all the time that I actually usually watch it... So, I have to watch it for longer periods of time than when I first started, I wouldn't say I was addicted immediately. It took time. So now I watch it more than I used to...In order to feel satisfied" (P1, M26).

How mukbang viewers develop tolerance over time is analysed within two different headings. First of all, with the pleasure and satisfaction it provides, watching mukbang became problematic over time, rather than being an activity that was only used for leisure time. Four participants stated that it took up much more of their time (over an extended period) than it did at first.

Key theme 4 – Inability to stop

This key theme was based on the participants' views on why they could not stop watching mukbang. The sub-themes within the 'inability to stop' key theme are presented in Table 3. Within the key theme, there were two sub-themes: *participants' behaviours* and *feelings towards stopping watching mukbang*. All of the participants explained that they tried to stop or reduce watching mukbang, but they were not successful. One of the participants stated that she was stressed because she watched too much mukbang and that she spent more time watching mukbang than on her university lessons and homework. Despite all these feelings, she tried to stop watching mukbang, but she said that she started watching mukbang again the next day (P2). Similarly, another participant stated that he once did not watch mukbang for the whole day but started

watching it again at night:

“It’s hard to quit mukbang videos, because in 2020, I was stressing that I’m taking up time, the time that I’m supposed to be studying. I’m taking so much time watching those videos when I should be doing my homework, so it gets stressful would try to quit for a day, but I’m not able to, but the following day, obviously I will just go back to them, so it’s very hard to quit them” (P2, F21).

“There was a time when I tried and I didn’t watch mukbang for the whole day. And then during the night, I started watching” (P7, F24).

AOne participant who stated that he always tended to watch more mukbang videos also said he did not even realise this while watching them and did not understand how the time had passed (P6). One participant who took a break from watching mukbang while preparing for exams stated that when she took a small break, she constantly came across mukbang videos on YouTube, and after watching one, she could not stop herself from watching another one:

“I tried to stop when I studied with my examinations, but then I would be maybe browsing something, I would go to YouTube and then the details of mukbang keeps on popping up. So, I will be like, OK, let me just take a few minutes to watch this video and I will go back. So, I tried, but then I couldn’t... I tried but it didn’t work because the videos just keep on popping up. And then I would give up watching this one, after the other one comes another one. So, you just continue watching and watching” (P7, F24).

It was also found that individuals reported it difficult to quit and reduce their mukbang watching, but they thought that they could not quit and experienced negative emotions when they tried to quit. However, the situation was not limited to this. It was also found that three participants experienced relapse by starting to watch mukbang again. They lost control over their behaviour, continued to watch unconsciously, and had difficulty in resisting their urges.

Key theme 5 – Loss of interest

The key theme of ‘loss of interest’ occurred in situations where participants lost interest in other hobbies because they watched mukbang. The sub-themes within this key theme are presented in Table 3. The participants’ experiences within this key theme comprised two sub-themes: *control* and *change*. While three of the participants thought that they made an uncontrolled choice between watching mukbang or doing something else, three of them thought that these choices were conscious. One of the participants stated that watching mukbang was not something that could be controlled and that he watched mukbang instead of socialising with his friends (P1).

“You know with addiction it is not something that you can control, even me. Now I would say I spend more time watching mukbang than socialising with friends... Because with the little time that I have, I’d rather watch mukbang than go outside, for instance, visit a friend” (P1, M26).

Another point emphasised was the changed and decreasing interests in other things. One of the participants stated that she used to like writing and used to write when she took a break from studying, but now she only watched mukbang instead of writing. She also stated that she no longer did the things she liked to do:

“I could take breaks when I’m studying. I used to write because I love writing. I used to write. But now the breaks that I take, I take to only watch mukbang. So, I think I’m no longer participate in things that I like” (P2, F21).

When looking at the effect of watching mukbang on habits and hobbies, five participants generally did not show interest in many things that they used to be interested in. They replaced their behaviours and hobbies that they used to enjoy with watching mukbang. It is interesting

that only one of the participants expressed that watching mukbang instead of engaging in other activities was a conscious choice whereas four participants stated that they continued watching mukbang uncontrollably.

Key theme 6 – Continuing despite problems

‘Continuing despite problems’ was based on the problems that the participants faced due to watching mukbang. The sub-themes within this key theme are shown in Table 3. In this key theme, various problems encountered by the participants due to watching mukbang comprised two themes. The first sub-theme was *health-related problems* and the second sub-theme was *task-related problems*. Five of the participants emphasised that they had problems with sleep. One of the participants stated that he watched mukbang when he should be sleeping, so he felt tired when he went to work and had trouble focusing:

“For instance, it affects my work a lot because I find that when I have to rest, I’m watching mukbang videos. So, now when I get to work, I’m exhausted, I’m tired, I can’t really focus. I can’t put in that full attention to my work because of watching mukbang videos... So, now I watch mukbang late at night and then I can’t get enough sleep” (P1, M26).

One participant stated that she neglected her education-related tasks, and fell behind because she ignored what she had to do and as a result, she felt sad and disappointed:

“One of the things that has affected me the most is neglecting the duties that I have to do like homework. So, I always fall behind in homework. I do not finish up the homework that I’m supposed to do. And it gets stressful because I’m in university, so there’s a lot of work that is going on. So, I think it upsets me because I get frustrated and I’m not able to perform the way I should be performing in my academic studies, so it’s like it really does affect me, especially when it comes to my academic studies and having to do the things that are important” (P2, F21).

Five participants had problems with their health, especially sleep, due to watching mukbang, and that these problems caused other problems in their occupational and educational lives because they ignored their responsibilities in college/university, work, and daily life.

Key theme 7 – Deceiving family/friends

This key theme involved participants’ views on lying to their family and friends about watching mukbang. The sub-themes within the ‘deceiving family/friends’ key theme are shown in Table 3. This key theme comprised two themes: *reasons* and *coping strategies*. The participants explained in various ways why they deceived their family and friends and the ways in which they did it. In general, all of the participants were in some way dishonest with their family and/or friends about watching mukbang. One participant explained that she lied to her family about watching mukbang because they did not understand the content of mukbang and watching mukbang seemed funny and meaningless (P7):

“I lied to my family because ... according to one of my family members, they said it was funny watching mukbang. So, for them, it doesn’t make sense someone watching mukbang. They don’t get the content. So, I would lie that I am watching maybe some channel or whatever not mukbang” (P7, F24 years).

Three participants preferred to hide and secretly watch mukbang instead of lying or telling their family or friends that they watched mukbang (P4):

“If I’m around my family, I’m even sure that I think my mom thinks that I just don’t watch mukbang. I don’t think she knows that I do watch mukbang... they even questioned me to say ‘Okay, what are you watching anyway?’ I just hide it but not lie about it” (P4, F27).

One of the things that participants hid from others was how long or how many videos they had watched. One participant tended to hide the number of videos he watched by telling others much less than the real number (P6):

"I do tend to hide how many videos I watch. I just normally say, 'Oh, I just watched one or two videos' knowing well that I watched over 50 to 60 more videos" (P6, M25).

It was observed that individuals gave false information about their mukbang watching to their family and friends and avoid revealing the truth.

Key theme 8 – Relieving negative mood

In the theme of 'relieving negative mood', the views of the participants on how and which negative thoughts they got rid of by watching mukbang were identified. The themes within this key theme are shown in Table 3. These involved the thoughts and feelings of the participants before watching mukbang and after watching mukbang. Individuals who had negative thoughts and feelings before watching mukbang expressed that they felt better after watching mukbang. One of the participants stated that when she is sad, she watched mukbang to get rid of the sadness (P4):

"Especially when I'm sad it washes away my sadness. I'll have something to focus on, definitely" (P4, F27).

Watching mukbang, especially when she went through intense periods, helped her to overcome her troubles easily (P7). At the end of a stressful day, one participant could spend the rest of the day watching mukbang to escape from the world or problems and relieve stress (P5):

"I was in a distressing way when I was busy with my exams. After a hectic exam, I will just watch mukbang to relieve distress, and to relieve anxiety and panic attacks that I had during the exams, and then I'll be fine" (P7, F24).

"Coming home from a stressful day at work and being able to escape and immerse myself into the world... [my] job is at risk in that same scenario. Those days, I think I watched mukbang. I think for the rest of the day. Yeah, I think it does help when it comes to stress issues, especially on my end, it does" (P5, M33).

According to six participants, watching mukbang was a way to get rid of their negative feelings and thoughts.

Key theme 9 – Risking relationships

This theme was based on participants' views on how they risked their relationships by watching mukbang. Within the 'risking relationships' key theme, the opinions of the participants comprised two sub-themes: *friendships* and *family relationships*. The themes in this key theme are shown in Table 3. One of the participants stated that their friendship relationships weakened with watching mukbang and came to the point of rupture and that his friends could no longer maintain their friendship and gave up. Therefore, he thought that he had completely lost his friends (P1):

"I've lost some of my friends, Actually, they just gave up. So, I've lost some of my friends because of [mukbang watching] because they can't keep up with this...Not all of them. Some of them I still have, but some they actually stopped talking to me. I lost them. They are not really my friends anymore because of this" (P1, M26).

One participant who thought that the ties with her family had weakened stated that she no longer participated in the family activities she used to participate in and that she did not spend as much time with her family as before. This situation made her family angry and caused them to think that there were other problems underlying this problem

(P8):

"There was a TV show that we used to watch as a family and then if they called me to come and watch it with them, I ended up not going to watch it because I'm actually enjoying watching what I'm watching at that moment. So, I end up not participating in family time and family activities. And then, for example, if they're going out because I'm enjoying what I'm doing [watching mukbang], I just end up staying at home and continue doing what I'm doing...they end up being a bit angry and frustrated with me. And sometimes it really turns into a conflict because they think that I don't want to be part of the family, I don't want to engage and I don't want to spend the time that we used to spend. So, they end up thinking that there's issues underlying issues than what I'm showing" (P8, F27).

Individuals' relationships with their families and friends weakened due to their prioritisation of watching mukbang. They ignored their relationships for the sake of watching mukbang, and they were sometimes insensitive to the requests and needs of their family and friends. While this situation usually led to the end of their friendship relationships or to the point of rupture, it sometimes caused different problems with their families.

General discussion

Although the literature focuses on addictive activities such as social media addiction, online gaming addiction, and online sex addiction, there is little research on the addictive effect of watching mukbang (Kircaburun et al., 2021c). As far as the present authors are aware, there have been no prior studies taking a qualitative approach to explore problematic mukbang watching. Therefore, the present study provides a novel contribution to the literature with its in-depth examination of addictive mukbang watching. The present study adapted the criteria of behavioural addiction symptoms to investigate addictive mukbang watching by using a qualitative research design. Mukbang watching addiction has been found to be positively associated with internet addiction (Kircaburun et al., 2021a). Ryan et al. (2016) adapted the negative consequences of internet addiction (e.g., loss of control, mood changes, withdrawal symptoms, and excessive use) in their study to examine Facebook addiction. In the present study, preoccupation, withdrawal, tolerance, inability to stop, loss of interest, continuing despite problems, deceiving family/friends, relieving negative mood, risking relationship symptoms of gaming disorder were used as content-directed key themes.

Preoccupation was one of the key themes in the present study. Similar findings were obtained in a study on YouTube watching addiction. Klobas et al. (2018) found that the participants with YouTube watching addiction talked about YouTube as an important activity in that it dominated their lives, that they could not quit even though it harmed their lives, and that they could not limit their use. In this sense, the findings of the present study showed similarities with the study of Klobas et al. (2018). Furthermore, preoccupation was one of the addictive YouTube use symptoms that distinguished addicted YouTube users from compulsive YouTube users in a qualitative interview study (Klobas et al., 2019). Consequently, preoccupation may be seen as an important symptom of different behavioural addictions that also appears to be present among addictive mukbang viewers. Moreover, Ryan et al. (2016) examined Facebook addiction using qualitative interviews and found that 'checking for new content' was the strongest sub-theme in preoccupation. In the present study, all participants stated that they were always thinking about the mukbang shows and waiting for the new content impatiently. In this regard both studies show similarities.

The second theme examined in the present study was withdrawal. The findings showed that not being able to watch mukbang caused participants to experience anxiety, get angry, and be unhappy and stressed. The results concur with the extant literature on technology-related behavioural addictions that showed addictive online

behaviours and problematic binge-watching were commonly associated with negative feelings associated with withdrawal symptoms including depression, anger, and anxiety (Flisher, 2010; Starosta et al., 2021). The findings are also similar to the criteria Young (1996) developed for diagnosing internet addiction, wanting to spend more time in front of the computer, and experiencing anxiety and depression when trying to reduce the time spent in front of the computer. The findings also concur with previous scale-development studies reporting withdrawal symptoms as one of the important components of problematic TV series watching and addictive mukbang watching (Kircaburun et al., 2021c; Orosz et al., 2016).

Tolerance was another key theme of the present study. Participants watched mukbang more and more over time and the time they spent watching mukbang had gradually increased. This is consistent with the findings of the study from Klobas et al. (2018) who reported that problematic *YouTube* users had lack of self-regulation over their *YouTube* watching behaviour, and watched *YouTube* at every opportunity. Findings of the present study suggested that participants watched mukbang excessively. Sometimes they watched a lot of different mukbang videos to feel satisfied. The findings of the present study also concur with the extant literature that indicate that the need to watch more videos to feel satisfied and having urges to watching videos all the time are important predictors of problematic binge-watching (Flayelle et al., 2019; Forte et al., 2021).

Participants also indicated that they were struggling to stop watching mukbang. Even though three of the participants tried to stop, they started watching mukbang again. The findings of the present study concur with the existing studies on other technology-related behavioural addictions that reported some of the users were struggling to stop engaging in addictive online behaviours (see Griffiths et al., 2012 for a review). For instance, different studies on binge-watching behaviour have identified loss of control and relapse as some of the important indicators of problematic binge-watching behaviour (Flayelle et al., 2019; Orosz et al., 2016). The inability to stop watching videos was also present among some of the addicted *YouTube* users (Balakrishnan and Griffiths, 2017). Moreover, in a qualitative interview study with Chinese young adults, continuing to watch online videos despite experiencing negative feelings (e.g., anxiety, regret) was among the symptoms of addictive online video watching (Yang et al., 2021). Failed attempts to stop watching mukbang seems to be one of the symptoms of behavioural addiction that may indicate loss of control over the behaviour.

One of the key themes was loss of interest which refers to losing interest in hobbies and other activities due to excessive engagement on mukbang watching. This is in line with some previous studies that indicated loss of interest in other activities due to other addictive online behaviours. For instance, a cross-sectional study identified that some of the participants neglected household chores to spend more time on watching television series (Forte et al., 2021). The literature has also identified loss of interest in engaging in social activities due to the urge to binge-watch TV series (Flayelle et al., 2019). The present results also concur with the previous studies on online behavioural addictions reporting individuals' increased loss of interest on working on their educational and daily tasks due to addictive social media use (Vilca and Vallejos, 2015).

Participants indicated that they kept watching mukbang excessively even though they experienced problems. Continuing despite problems is another symptom of addiction. The findings of the present study found that addictive mukbang watching appeared to cause participants to have sleeping problems that resulted in lower performance at work or other daily routines. In the literature regarding addictive use of social media, gaming, and online video watching, findings mostly show that despite the negative consequences, individuals still continue with their addictive behaviour resulting in sleeping problems which consequently leads to decreased performance at work or other daily routines (Griffiths et al., 2012; Lopez-Fernandez et al., 2022; Ryan et al., 2016). Another qualitative interview study reported that viewers kept watching online videos

despite having adverse physical consequences including blurry vision and neck injury (Yang et al., 2021). Consequently, the present study's findings concur with the existing studies that reported continuing despite problems as another behavioural addiction symptom.

Six of the participants indicated that they deceived their families and/or friends about how much time they spent watching mukbang. This finding concurs with the existing studies in the literature where some of the users addicted to the internet hid the extent of their internet use from family and friends (Young, 1996). According to a literature review, deceiving family members and therapists about the amount of time spent on internet is a criterion for diagnosing internet addiction (Medenica et al., 2015). In a scale development study, it was found that deception of family/friends was one of the important symptoms of social media disorder (Van den Eijnden et al., 2016). It appears that individuals with the risk of becoming addicted to particular online activities and internet in general tend to lie and/or hide how much they spend time on internet or the particular activities. Consequently, the present study indicated deception was also a symptom of addictive mukbang watching.

Relieving negative mood through watching mukbang was another symptom of addictive mukbang watching. Most of the participants used excessive mukbang watching for positive mood modification. Previous studies on behavioural addictions have shown that addictive technology use helped participants to obtain secondary benefits, including coping with negative emotions and thoughts (Lopez-Fernandez et al., 2022), as well as escaping from unpleasant feelings (Ort et al., 2021). Some studies argued that viewers watch mukbang to escape from the unpleasant reality of their life by interacting with others worldwide (Jengingn and Mohamad, 2022). A scale development and validation study with emerging adults also indicated that positive mood modification was the most prevalent symptom of problematic series watching reported by participants (Fino et al., 2022). The findings of the present study concur with the existing literature on other technology-related behavioural addictions and mukbang specifically (Fino et al., 2022; Jengingn and Mohamad, 2022; Kircaburun et al., 2021c).

Two of the participants noted that they risked their relationships with families and/or friends due to addictive mukbang watching. This finding is in line with the extant literature suggesting that addictive online behaviours may lead to individuals risking relationships with their close circle. For instance, a study that investigated addictive use of *YouTube* reported participants' *YouTube* addiction affected their relationships with members of their family and led to losing their friends (Klobas et al., 2018, 2019). Negative social consequences were other symptoms of excessive binge-watching behaviours (Starosta et al., 2019). Furthermore, addictive use of internet has caused individuals to have marital problems and lose family and friends (Flisher, 2010; Young, 1996). Another study on smartphone addiction indicated that excessive smartphone use disrupted participants' work and family/friendly gatherings (Li and Lin, 2019). Addictive Facebook use is another technology-related behavioural addiction that has led to having problems with engagement in social situations (Ryan et al., 2016).

Limitations

The present study is not without limitations. First, the data comprised self-report data. This is susceptible to well-known biases. Second, the participants only came from three countries and three-quarters of the participants were from South Africa. Future studies should include participants from different nationalities. Third, the age range of the participants was limited. Future studies should use study groups from different age groups. The interviews were continued until data saturation was reached, meaning that no new findings were added. Fourth, there was no formal screening for psychiatric comorbidity in the sample. Future studies should conduct post-hoc assessments to gather information regarding the psychiatric comorbidities of participants and integrate validated screening tools for psychiatric comorbidities into

future research protocols.

Conclusion

The present study is the first to investigate addictive mukbang watching using an in-depth qualitative methodology. It appears that the criteria for gaming disorder has symptoms and consequences that are applicable to addictive mukbang watching. Although, there is an argument that suggests that all behaviours should be examined by investigating specific properties instead of using common symptomatology (Flayelle et al., 2017), the present study supported the notion that all addictive online behaviours share common symptoms and signs that comprise addiction (Griffiths, 2005).

The present results suggest that mukbang watching could be another online activity that may transform into technology-related behavioural addiction for a minority of viewers. Furthermore, some mukbang viewers may experience addiction-like symptoms that have impairments to their mental, physical, and psychosocial health. The present results provide important empirical evidence that watching mukbang may result in adverse health consequences and should be taken into consideration by health professionals and clinicians. More studies are needed to investigate the correlates, prevalence, and factors that may lead to or be affected by addictive mukbang watching in order to obtain better understanding of this problematic online behaviour. Future studies should focus on replicating the present results using different research methods (e.g., large-scale surveys, longitudinal designs) and more diversified study groups from different age groups and sociodemographic features. Furthermore, studies that examine the mediating and moderating factors that may exacerbate or diminish addictive mukbang watching are also needed.

Author statement

All persons who meet authorship criteria are listed as authors, and all authors certify that they have participated sufficiently in the work to take public responsibility for the content, including participation in the concept, design, analysis, writing, or revision of the manuscript.

CRediT authorship contribution statement

Kagan Kircaburun: Data curation, Formal analysis, Writing – original draft. **Filipa Calado:** Conceptualization, Supervision, Writing – review & editing. **Andrew Harris:** Conceptualization, Supervision, Writing – review & editing. **Mark D. Griffiths:** Conceptualization, Supervision, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix. Interview Questions

General

1. What is your gender?
2. What is your age?
3. How and when did you start watching mukbang?
4. How much daily time do you spend watching mukbang on average?
5. How many mukbang videos do you watch every day on average? Do you watch mukbang videos of the same mukbangers or different ones?
6. How many different mukbangers do you regularly watch?

Preoccupation

1. Some people, when they are not watching mukbang, fantasise about watching mukbang, think about previous mukbang videos that they watched, and/or anticipate the next time they will watch mukbang. What do you think about this? Do you experience this too?

Withdrawal

1. Some people feel restless, irritable, anxious, and/or sad when they are unable to watch mukbang or watch mukbang less than usual? What do you think about this? Do you experience this too?

Tolerance

1. Some people feel the need to watch mukbang more often or watch mukbang for longer periods to feel that they watched enough. What do you think about this? Do you experience this too?

Inability to stop

1. Some people try to reduce the time spent on watching mukbang or quit watching mukbang but fail. What do you think about this? Do you experience this too?

Loss of interest

1. Some people prefer to watch mukbang rather than meet their friends or participate in hobbies and pastimes that they used to enjoy before. What do you think about this? Do you experience this too?

Continuing despite problems

1. Some people watch mukbang a lot despite negative consequences (for instance losing sleep, not being able to do well in education or work, having arguments with your family or friends, and/or neglecting important duties). What do you think about this? Do you experience this too?

Deceiving family/friends

1. Some people try to keep their family, friends or other important people from knowing how much they watch mukbang or lie to them regarding their mukbang watching. What do you think about this? Do you experience this too?

Mood modification

1. Some people watch mukbang to relieve a negative mood (for instance helplessness, guilt, or anxiety). What do you think about this? Do you experience this too?

Risking relationships/jobs

1. Some people risk or lose a significant relationship because of mukbang watching. What do you think about this? Do you experience this too?
2. Some people jeopardize their education or work performance because of mukbang watching. What do you think about this? Do you experience this too?

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