# How Good or Bad is Netflix for its Users?

## The Relationship Between Binge-Watching and Self-Regulation of Eating Behaviour

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## Abstract

**Introduction**: Binge-watching, the act of watching three or more episodes subsequently, is associated with gaining weight due to its relationship with variables such as mindless eating or an unhealthy diet. Nonetheless, little is known about the relationship between binge-watching and self-regulation on eating behaviour with the latter variable also including whether individuals tend to have a healthy diet or not. Therefore, the aim of this study was to discover whether there is a relationship between binge-watching and self-regulation skills on eating behaviour.

**Method**: In this research, a cross-sectional online survey design was conducted. The sample was composed of 209 participants, of whom the majority was female ($n$ = 147, 70.33%) and the age range was between 18 and 55 years ($M_{age}$ = 23.9 years; $SD_{\text{age}}$ = 6.6 years). The sample population consisted mostly of German respondents (59.3%). To assess the self-regulation skills on eating behaviour, the questionnaire contained the Self-Regulation of Eating Behaviour Questionnaire (SREBQ). Additionally, participants had to answer five questions about their watching behvaiour. To answer the research question, Spearman Rho correlations were conducted.

**Results**: Binge-watching behaviour was significantly negatively correlated with self-regulation skills on eating behaviour ($r_s$ = -.25; $p$ < .001) meaning that individuals who binge-watched, tend to show low self-regulation skills on eating behaviour. Also, binge-watching was significantly negatively correlated with a healthy diet ($r_s$ = -.31; $p$ < .001) indicating that participants who tend to binge-watch rated their diet as less healthy.

**Discussion**: These results suggest that there exists a weak and significant relationship between binge-watching and low self-regulation on eating behaviour as well as between binge-watching and an unhealthy diet. Therefore, binge-watching is again associated with variables that lead to increased weight gain. Based on these findings, interventions should be developed targeting especially binge-watchers to help improve their self-regulation on eating behaviour.

## Introduction

"How I Met Your Mother", "Friends" and "The Big Bang Theory" are all popular series that people enjoy watching on cable television, but also on video streaming services. Such services can be described as platforms on which users can easily stream movies, series, and documentaries online (Mikos, 2016). A couple of years ago individuals had to wait a whole week to be able to see the next episode of those series (Umesh & Bose, 2019). Nowadays, thanks to streaming services such as Amazon Prime, Hulu, and Netflix, people do not have this problem anymore. As long as they have a stable internet connection, they can use the mobile application on their smartphone or go directly to the streaming service homepage to see what and when they want, irrespective of where they are (Burroughs, 2018; Matrix, 2014).

Because individuals can watch streaming services at any place and any time, it is no surprise that users are spending more and more time on those services (Hallinan & Striphas, 2016). Recently, this has led to a behaviour called binge-watching (Panda & Pandey, 2017; Shim et al., 2018). Binge-watching can be defined as watching multiple episodes in a row, but the exact number of watched episodes varies from definition to definition (Erickson et al., 2019; Walton-Pattison et al., 2018). Throughout this research paper, the term "binge-watching" will refer to watching three or more episodes in a row (Walton-Pattison et al., 2018). Since people are engaging more and more in the practice of binge-watching (Trouleau et al., 2016), this raises the question of what consequences this behaviour has on individuals' lives.

Several studies have already shown that the use of streaming services and more precisely binge-watching affects our life in several ways (Tukachinsky & Eyal, 2018). On the one hand, binge-watching can have positive effects such as facilitating the process of socialization since the exchange of opinions about series creates a sense of belongingness to a fandom (Umesh & Bose, 2019). On the other hand, research indicates that people who frequently engage in binge-watching are more likely to suffer from low well-being due to symptoms of depression, fatigability, and mood disturbance (Tukachinsky & Eyal, 2018). Moreover, there have been some studies showing that spending too many hours on streaming services can then lead to unsatisfactory self-regulation (Exelmans & van den Bulck 2017). This relationship can even be the other way around, meaning that low self-regulation can be a predictor of binge-watching (de Feijter et al., 2016). Furthermore, existing research recognizes the critical role played by binge-

watching on the process of gaining weight (Blass et al., 2006; Mekhmoukh et al., 2012; Ogden et al., 2013).

The relationship between watching too many episodes and gaining weight can be explained by looking at different sub-relationships. For instance, spending more time in front of television often leads to higher consumption of snacks which significantly increases the calorie intake of the day (Chapman et al., 2012). In addition to the often-mindless eating that occurs in front of the screen, individuals who enjoy binge-watching are more likely to have a worse diet (Vaterlaus et al., 2018; Vik, 2013). Moreover, people who spend more time on streaming services, tend to procrastinate more on their own daily tasks such as engaging in physical activity (Flayelle et al., 2019). In general, binge-watchers show more sedentary behaviour such as spending a lot of time sitting in front of the screen (Tremblay et al., 2011). However, gaining weight cannot only be traced back to consuming snacks in front of the television or reduced physical activity, but also to other variables such as self-regulation skills on eating behaviour. To date, there are few studies that have investigated the association between binge-watching and self-regulation on eating behaviour.

Self-regulation skills on eating behaviour can be defined as the several processes that increase the likelihood that individuals pursue their eating goals (Baumeister et al., 2006; Boekaerts et al., 2005; de Ridder et al., 2012). This then includes steps such as aiming to resist "tempting" food and the ability to stick to this aim (Fishbach et al., 2003). People who have a lack of self-regulation skills on eating behaviour tend to consume more unhealthy food than individuals who score higher on those skills (Kroese et al., 2009, Teixeira et al., 2011). Additionally, previous studies have demonstrated that poor self-regulation skills are also associated with increased weight (Johnson et al., 2012).

Investigating the relationship between binge-watching and self-regulation on eating behaviour is important, especially, at the current moment since more and more individuals are adhering to streaming services (Hallinan & Striphas, 2016). Additionally, as already explained binge-watching is associated with mindless eating and a lack of physical activity, variables that lead to increased weight (Chapman et al., 2012; Flayelle et al., 2019; Vik et al., 2013). A possible relationship between binge-watching with self-regulation on eating behaviour would be another sub-relationship of binge-watching and a variable that is associated with gaining weight. In case of a possible relationship between both variables, interventions could be developed to

increase the self-regulation skill on eating behaviour of binge-watchers to decrease the likelihood for them to gain weight. Thus, it is crucial to investigate the presence of a relationship between binge-watching and self-regulation in eating. As a result of the research gap between binge-watching and self-regulation on eating behaviour, the aim of this study is to explore if there is a relationship between these two variables. Therefore, based on the literature research and the lack of information regarding the relationship between binge-watching and self-regulation on eating behaviour, this study will deal with the research question: “To what extent are binge-watching and self-regulation in eating behaviour of streaming service use related?”

# Method

## Design

For this research, a cross-sectional online survey design was conducted. The study was authorised by the Ethics Committee of the Faculty of Behavioural Sciences (ECBMS) at the University of Twente and obtained the request number 200352.

## Participants and procedures

Primary inclusion criteria for participation were as follows: participants should be older than 18 years, subscribed to at least one streaming service, and have sufficient proficiency of English to complete the questionnaire. Participants were recruited by convenience sampling via the social network of the researchers such as friends and family.

Potential participants obtained a link for the questionnaire on Qualtrics via social media platforms such as Facebook and WhatsApp. Firstly, they opened an informed consent page in which information about the aim of the study and about how their data would be treated, were presented (Appendix A). There they could also find the notification that they should try to remember how their watching behaviour was before the COVID-19 situation. This information was provided because the researchers aimed to measure regular behaviour rather than the behaviour during the COVID-19 lock-down. If they were in accord with the given information, they gave their consent, and only then the questionnaire started. Secondly, the questionnaire began with demographic questions and questions related to their watching behaviour. Participants were asked which streaming services they were subscribed to. Individuals who were not subscribed to any streaming service were sent to the end of the survey since they did not meet the inclusion criteria. Thirdly, the participants answered questions regarding different topics such as self-regulation on eating behaviour and social relationships. Fourthly, after they finished answering the questions, they reached the last page of the questionnaire in which the contact details of the researchers were shown. Lastly, they could close the page to save their response. Generally, the completion of the questionnaire took around 20 minutes.

## Materials

This research project was part of a collective effort of five individual bachelor-projects. Therefore, the questionnaire included different parts that focused on streaming services and their

relationship with different areas such as goal-setting behaviour and sleeping behaviour. For this study, only the questions used to investigate the relation between binge-watching and self-regulation on eating behaviour were used.

In the first part of the questionnaire, questions about the following demographics were asked: age, gender, educational as well as occupational level, and nationality (Appendix B). The second part of the questionnaire consisted of questions regarding the watching behaviour of the participants (Appendix C). Here, the researchers formulated their own five questions. The first question was: "Which video-streaming services do you use the most on a weekly basis?" For this question, the provided answer options were: "Netflix", "Amazon Prime", "Hulu", "Disney Plus"," YouTube", "Videoland", "Others", and "I do not use online-streaming services". The second question was: "How many days per week do you make use of online-streaming services?". The answer options were presented from "0" to "7" days. The third question was:" On average, how many hours do you use online-streaming services on a daily basis?". The answers options were in the range of "0" to "12" hours. The fourth question was: "On average, how many episodes in a row do you watch per day?". The answer options were presented from "0" to "more than 7 episodes". The fifth question was:" On a weekly basis, how many hours do you spend watching the following content: Series, Movies, and Documentaries." The answer options were given in the range between "0" to "more than 24".

The third part of the questionnaire contained the Self-Regulation of Eating Behaviour Questionnaire (SREBQ) (Kliemann et al., 2016). This questionnaire aimed to assess the capacity of individuals to control their eating behaviour. The study of Kliemann et al. (2016) showed that the SREBQ was consistent, valid and that it could be used among the adult population. The questionnaire consisted of two parts. The first part was a screening part and intended to illustrate whether individuals tend to have a healthy diet or not because individuals who have good self-regulation skills on eating behaviour are more likely to have a healthy diet (Kliemann et al., 2016). This part contained the question:" Would you describe your diet as healthy?" and had the answer options "Yes" and "No". To give the participants more variety in their answer, the question was reformulated to: "On a scale from 0 to 100% how healthy do you consider your diet?". The answer options were then provided on a scale from 0 to 100% where 0% would indicate that the diet was as unhealthy as possible and 100% would mean that the diet only consisted of healthy components. The higher the participants rated their diet, the healthier their

diet was. All answers below 50% indicated that the diet was considered rather unhealthy than healthy. Answers above 50% indicated that individuals saw their diet as more healthy than unhealthy. The second part of the SREBQ aimed to measure self-regulation skills on the eating behaviour and started by describing what tempting foods are. It had five questions such as for example:" I am good at resisting tempting food". The answer options were presented on a five-point Likert-scale (never, rarely, sometimes, often, always). The second part of the SREBQ was used in this research with no further changes (Appendix D). Items one, three, and five of the SREQB needed to be coded reversed (Kliemann, et al., 2016). To score the mean score of the second part of the SREBQ all items were summed together and then divided by five. Additionally, to gain a better overview of the self-regulation skills on eating behaviour, the participants' scores were divided into the official categorization of Kliemann et al. (2016): low (< 2.8), middle (2.9 – 3.6), and high (> 3.6). The higher the score on this part, the better the self-regulation skills on eating behaviour were. Lastly, the SREBQ proved to be reliable ($\alpha = .75$) and to have satisfactory internal consistency since the Cronbach's Alpha was above .7 (Cronbach, 1951; Taber, 2018).

**Data analysis**

The collected data were analysed using the IBM SPSS Statistics 26. Prior to analysing, the final dataset was prepared by deleting missing data (n = 50) and excluding participants that did not meet the inclusion criteria (n= 4). This resulted in 54 deleted questionnaires. Additional, qualitative answers such as gender were transformed into numeric variables.

Next, to illustrate the demographics of the participants as well as their self-regulation of eating behaviour, descriptive statistics such as mean scores (*M*), minimum, maximum, and standard deviations (*SD*), were calculated and tables were created with these numbers. To examine if there was a relationship between binge-watching and self-regulation skills on eating behaviour and binge-watching and healthy diet, a nonparametric test such as the Spearman-Rho was used (Cronk, 2019). This test was used because the assumption of homogeneity of variance was not affirmed by Levene's statistic ($F = .62$; $p < .001$). Furthermore, the assumption of normality was also not affirmed by the Shapiro-Wilk test ($p < .001$).

Binge-watching was treated as a continuous variable by using the number of episodes as values. For all analyses, a significance level of .05 was used, meaning accepting a probability of about 5% and rejecting the null hypothesis even though there is only a small association present

in the data. In addition to the Spearman-Rho analyses, a scatter plot was created to better visualise the relationship between the number of watched episodes in a row and the total score of the SREBQ. Additionally, a second scatter plot was designed to show the relationship between the number of watched episodes in a row and the percentage of a healthy diet.

# Results

## Characteristics of the sample population

In total, 209 respondents took part in this research. The majority of them were women (n= 147, 70,3%), from Germany, and between 18 and 55 years old ($M_{age}$ = 23.9; $SD_{age}$ = 6.6). Table 1 below illustrates more main characteristics of the sample population.

**Table 1**

Characteristics of the Sample Population ($N$ = 209)

| Characteristics | | Frequency | Percentage (%) |
|---|---|---|---|
| **Gender** | Male | 62 | 29.7 |
| | Female | 147 | 70.3 |
| **Nationality** | Dutch | 39 | 18.7 |
| | German | 124 | 59.3 |
| | Other | 46 | 22.0 |
| **Occupational level** | Pupil | 5 | 2.4 |
| | Student | 124 | 59.3 |
| | Employed full-time | 51 | 24.4 |
| | Employed part-time | 18 | 8.6 |
| | Unemployed | 5 | 2.4 |
| | Other | 6 | 2.9 |
| **Educational level** | Primary school | 4 | 1.9 |
| | High school | 130 | 62.2 |
| | Bachelor's degree | 43 | 20.6 |
| | Master's degree | 20 | 9.6 |
| | Doctorate | 2 | 1.0 |
| | Other | 20 | 9.6 |

## Watching behaviour of the sample population and the used streaming services

Next, table 2 demonstrates the means, standard deviations, minima, and maxima of the sample population concerning their watching behaviour. On average, the participants used

streaming services five days per week and watched 3.56 (*SD* = 1.27) episodes in a row. The sample population spent the most time watching series (*M* = 8.27; *SD* = 5.66) in comparison to other contents.

**Table 2**

*Watching Behaviour of the Population Sample (N = 209)*

| | Min. | Max. | M | SD |
|---|---|---|---|---|
| Days per week | .00 | 7.00 | 5.35 | 1.78 |
| Hours on a daily basis | 1.00 | 10.00 | 2.76 | 1.53 |
| Episodes in a row | 1.00 | 8.00 | 3.56 | 1.27 |
| Series weekly | .00 | 24.00 | 8.27 | 5.66 |
| Documentaries weekly | .00 | 24.00 | 1.59 | 2.64 |
| Movies weekly | .00 | 24.00 | 4.07 | 3.84 |

*Note.* Max., Min., M and SD represent the maxima, minima, mean values and standard deviations, respectively.

As shown in table 3, the majority of participants watched two (39.2%) or three (27.3%) episodes in a row. Besides, the mean of watched episodes in a row (*M* = 3.56), most participants tended to watch less than three episodes in a row.

**Table 3**

*Episodes Watched in a row (N = 209)*

| Episodes watched in a row | Frequency | Percentage (%) |
|---|---|---|
| 0 | 7 | 3.3 |
| 1 | 24 | 11.5 |
| 2 | 82 | 39.2 |
| 3 | 57 | 27.3 |
| 4 | 29 | 13.9 |
| 5 | 4 | 1.9 |
| 6 | 0 | 0.0 |
| 7 | 1 | 0.5 |
| More than 7 | 5 | 2.4 |

The most used streaming platform by the participants was Netflix (66.0%), followed by YouTube (23.0%). Platforms such as Amazon Prime (5.3%), Disney Plus (2.4%), Videoland (1.9%), and others (1.4%) were less used in comparison to the former two.

**Rating of participants' diet**

On the question "On a scale from 0 to 100% how healthy do you consider your diet?", participants scored on average 63.40% (*SD* = 20.00). The majority of the sample population (n = 152, 72.7%) saw their diet as more healthy than unhealthy since they rated their diet above 50%. This means that their diet consisted of more healthy than unhealthy components.

**Participants' total score on the SREBQ**

The participants' average score on the SREBQ was 3.19 (*SD* = .67) which demonstrates that on average participants showed middle self-regulation skills in eating behaviour. In general, 47.8% of participants felt in the category of middle self-regulation on eating behaviour as illustrated in table 4.

**Table 4**

*Classification of Participants' Scores on the SREBQ (N = 209)*

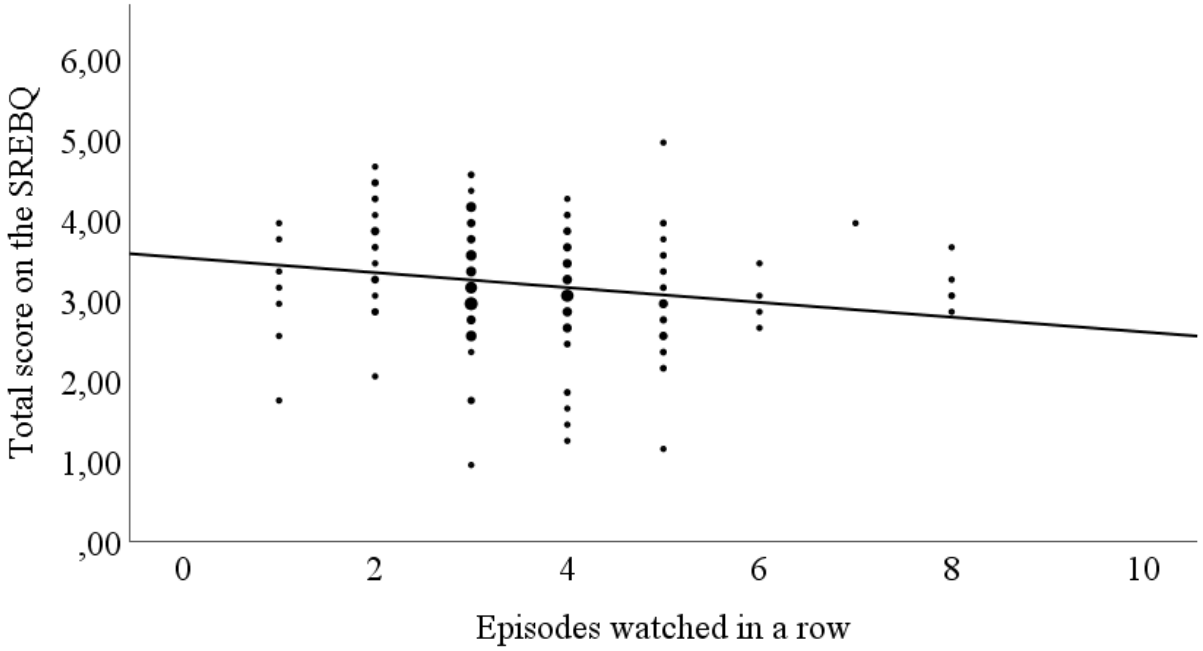
| | Frequency | Percentage (%) |
|---|---|---|
| Low | 62 | 29.7 |
| Middle | 100 | 47.8 |
| High | 47 | 22.5 |

**Relationships between binge-watching and self-regulation on eating behaviour**

Results of the Spearman Rho correlation indicated that there was a weak significant negative association between the number of episodes watched in a row and the total score of the SREBQ ($r_s$ =-.26; $p < .001$). This indicates that participants who tended to watch more episodes subsequently had worse self-regulation on eating behaviour than individuals who watched fewer episodes. Figure 1 illustrates the relationship between the episodes watched in a row and self-regulation on eating behaviour.

**Figure 1**

*Relationship Between number of Watched Episodes in a row and Total Score on the SREBQ (N = 209)*

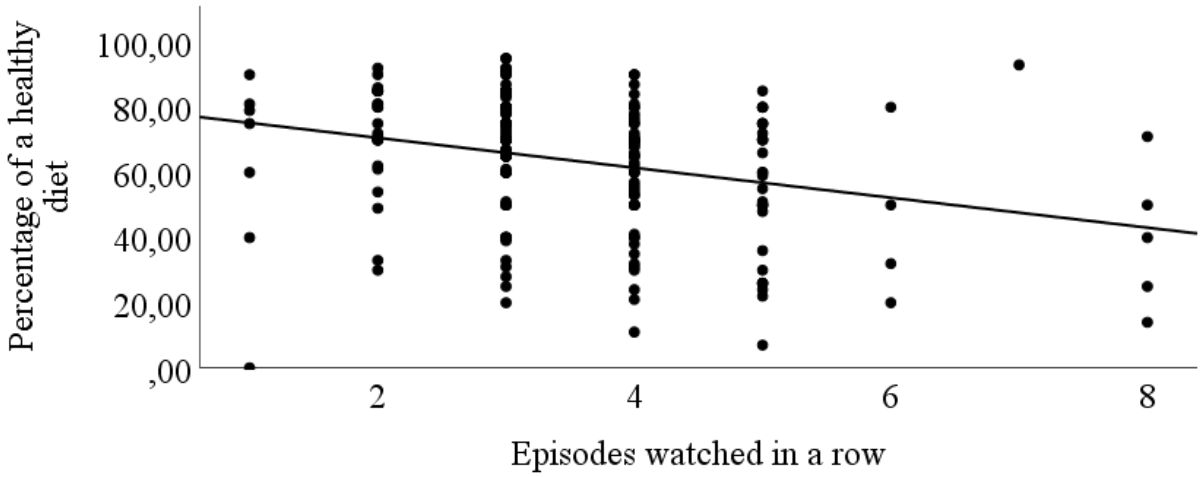



**Relationship between binge-watching and healthy diet**

Between the binge-watching and the percentages of a healthy diet a weak significant negative correlation could be found ($r_s$ = -.32; $p$ < .001), meaning that participants who watched more episodes in a row rated their diet as less healthy than individuals who did not engage in binge-watching. In figure 2, the relationship between the episodes watched in a row and a healthy diet is visualised.

**Figure 2**

*Relationship between number of watched episodes in a row and a healthy diet (N = 209)*



# Discussion

## Principal findings

The aim of this study was to examine whether there is a relationship between binge-watching and self-regulation skills on eating behaviour. Findings suggest that individuals who tend to engage in binge-watching have worse self-regulation skills on eating than individuals who do not watch several episodes in a row. Also, participants who admitted spending more time in a row on streaming services tended to rate their own diet as less healthy than participants who did not engage in binge-watching. To conclude, this study showed that there is a relationship between binge-watching and self-regulation on eating behaviour, however, this relationship was rather weak.

## Interpretation and implications of the results

Although the relationship between binge-watching and self-regulation skills on eating behaviour was rather unexplored, the existence was expected, since the literature on binge-watching has already highlighted that there is a negative relationship between binge-watching and self-regulation skills in general (Exelmans & van den Bulck, 2017; Merrill & Rubenking, 2019). In contrast to self-regulation skills on eating behaviour, there already exist prior studies regarding binge-watching and healthy diet. According to Vaterlaus et al. (2018) individuals who binge-watch are more likely to consume less healthy foods and have a less balanced diet than individuals who spend less time on streaming services. Forasmuch as it was already expected that participants who spend more time on streaming services would rate their diet as less healthy than other individuals. A reason for the link between the two variables could be that during the time individuals are watching streaming services, they are more disposed to mindless eating (Chapman et al., 2012). Furthermore, watching television is often associated with unhealthy snacks (Thorp et al., 2013). Another reason for these outcomes might be traced back to the sample population which consisted mainly of young adults. This target group tends to spend more time on streaming services than older individuals (Merrill & Rubenking, 2019). In addition to their binge-watching behaviour, younger individuals also have more difficulties at regulating their own eating behaviour (Chambers et al, 2008).

As previous studies have already demonstrated, binge-watchers are more likely to gain weight (Blass et al., 2006; Mekhmoukh et al., 2012; Ogden et al., 2013). This is because they

exercise less and consume more (unhealthy) snacks, in comparison with individuals who do not binge-watch (Chapman et al., 2012; Flayelle et al., 2019; Vik et al., 2013). This work has shown that individuals who binge-watch tend to have low self-regulation on eating behaviour which is another variable associated with gaining weight (Johnson et al., 2012). The more time individuals spend on streaming services, the higher the chance for them to gain weight. In the long-term this might lead to several health problems such as type 2 diabetes mellitus and coronary heart diseases (Finer, 2015). This work has highlighted the importance of creating interventions to improve the self-regulation skills on eating behaviour of individuals who watch several episodes in a row to decrease the likelihood that they gain weight. A possible intervention to improve self-regulation skills on eating behaviour could be a mindfulness-based intervention since such interventions have already proved to be successful in increasing these skills (Alberts et al., 2012). A possible way to reach streaming services users would be to publish this intervention as a series on the popular streaming services such as Netflix and Amazon Prime.

**Future work**

There is abundant room for further progress in the relationship between binge-watching and self-regulation on eating behaviour. Firstly, this study raises doubt of whether the relationship between binge-watching and self-regulation on eating behaviour is the reason why mindless eating occurs in front of the screen. Individuals might not eat more because they are binge-watching, but rather due to the fact that they have low self-regulation skills on their eating behaviour. To test this causality relationship, researchers could conduct an observational study in which they first measure the self-regulation on eating behaviour skills of the participants. Then, the participants would engage in the act of binge-watching and have snacks available for them. Afterwards, the researchers would compare the snack consumption of participants who had lower and higher self-regulation skills on eating behaviour. In case that the snack consumption varies in both groups, one could conclude that the mindless eating in front of the screen is not solely due to the act of binge-watching, but rather due to poor self-regulation skills on eating behaviour.

Secondly, this study also raises the question of what confounding variables could explain the relationship between binge-watching and self-regulation on eating behaviour. Two variables might be worthy to explore more in-depth. Those are *impulsivity* and *emotional state* (Riddle, et

al., 2018; Rubenking & Bracken, 2018). Not only are those variables associated with binge-watching, but they also linked to self-regulation on eating behaviour (Evers et al., 2010; Price et al., 2013). Hence, they could serve as an explanation of why people who binge-watch also, show lower self-regulation skills on eating behaviour. A possible way to understand whether emotional state causes the relationship between binge-watching and self-regulation on eating behaviour would be an observational study. In such a study the researchers would cause different emotional states in the participants and then see when they are more likely to engage in binge-watching and showing lower self-regulation skills on eating behaviour.

**Limitations and strengths of the study**

The generalisability of these results is subject to certain limitations. During the time of data collection, the participants were forced to stay at home due to the COVID-19 lock-down which could have had an effect on their average watching behaviour. In the questionnaire, the researchers highlighted the importance for them to remember how their watching behaviour was before the lock-down. This approach, however, could have led to recall bias meaning that individuals might have under- or overestimated their watching behaviour (Trull & Ebner-Priemer, 2009; Wonneberger & Irazoqui, 2017). To avoid recall bias, the researchers formulate the questions as precisely as possible for the participants to be able to report their behaviour before the lock-down with more accuracy. Nevertheless, future research could conduct a similar study to rule out recall bias.

Another possible limitation is the used method of convenience sampling because this signifies that the researchers knew the participants which could have resulted in social desirability bias on the part of the participants (Arnold & Feldmann, 1981; van de Mortel, 2008). It is possible that participants rated their diet as healthier as it actually is and that they underrated the time they devote to streaming services. Nevertheless, the researchers tried to reduce the socially desirable response bias by emphasizing that all data was anonymized and that it was impossible to track the data back to the participants. Next, the chosen design of the study (correlational design) cannot evaluate causality. From this study, the researchers cannot determine whether binge-watching causes lower self-regulation skills on eating behaviour or whether it is the other way around. Furthermore, the researchers cannot say whether mindless eating is present when binge-watching occurs due to poor self-regulation on eating behaviour. In

addition to those limitations, the results cannot be generalized to other populations since the majority of the participants were German and young individuals. Different nationalities and age groups could have different outcomes. Nonetheless, it was a good starting point to investigate the binge-watching behaviour of a younger population since they are the main users of streaming services and also the individuals who tend to binge-watch more (Merrill & Rubenking, 2019).

Besides the limitations of this study, also two major strengths were observed in the research design. Firstly, the most important strength of this study was that it contributed to having a better understanding of the relationship between binge-watching and self-regulation on eating behaviour since there was a research gap before this study. This research showed that there is a significant relationship between both variables. These results showed the necessity to develop interventions for individuals who binge-watch and it opens the door for future studies in several ways as mentioned earlier. Secondly, a quantitative method was used which facilitates the process of the results being generalized (Kealey & Protheroe, 1996). Furthermore, when a quantitative method is used, the data is more likely to be consistent, precise, and reliable (Balsley, 1970; Matveev, 2002).

**Conclusion**

To conclude, the results indicated that there exists a weak and negative relationship between binge-watching and self-regulation on eating behaviour, and binge-watching and a healthy diet. These findings suggest that people who binge-watch are more likely to have lower self-regulation skills on eating behaviour and a poorer diet. Therefore, mindfulness-based interventions should be developed to increase the self-regulation skills on eating behaviour of binge-watchers. Besides, future research should investigate in more depth the relationship between binge-watching and self-regulation on eating behaviour to understand what causes this behaviour. Two possible confounding variables are impulsivity and emotional state. Additionally, future research should investigate the relationship binge-watching, self-regulation on eating behaviour, and the mindless eating that occurs in front of the screen. It might be possible that mindless eating is caused by low self-regulation skills on eating behaviour rather than because of binge-watching.

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# Appendix A

## Informed consent

UNIVERSITY OF TWENTE.

*Dear Participant,*

You are being invited to participate in a joint research study of five individual Bachelor theses, approved by the ethics committee of the University of Twente.

This research is centered on the question **"How good or bad is Netflix for us?".** The study is carried out by bachelor Psychology students from the Faculty of Behavioural, Management and Social Sciences at the University of Twente.

The purpose of this study is to **reveal the relationship between your watching behaviour on streaming services and variables such as sleeping behaviour, (media-) escapism and its association with self-regulation, procrastination behavior, self-regulation skills on eating behaviour and social relationships.**

The questionnaire is divided into 7 different parts. It will take you approximately ***20*** minutes to complete the whole questionnaire.

Your participation in this study is entirely voluntary and you can withdraw at any time. When answering the questions, please consider that we are in a special situation with **Covid-19.** Try to take into account your behavior before this time and try to answer the questions by considering your behavior in general and **not only in the past weeks.**

We believe there are no known risks associated with this research study; however, as with any online related activity the risk of a breach is always possible. To the best of our ability, your answers in this study will remain confidential. We will minimize any risks by anonymizing all your data and storing it without any chance to identify you.

***For further questions, please contact us:***

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1st Supervisor: B. Bente

2nd Supervisor: Dr. N. Köhle

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I have read and understood the study information

○ Yes

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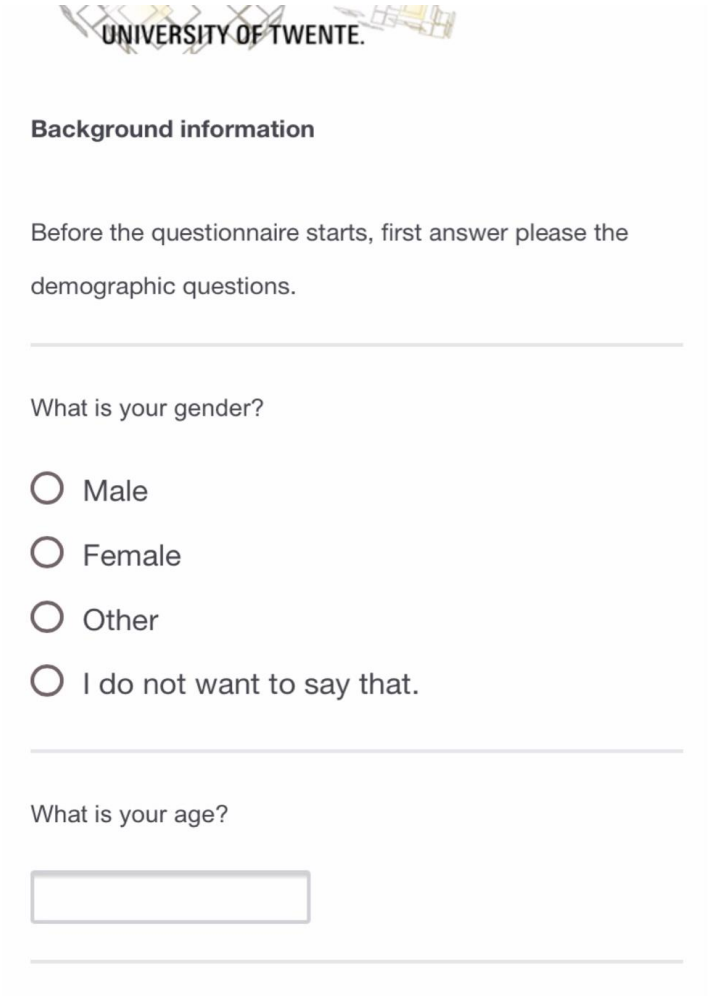
I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time without having to give a reason.

○ Yes

# Appendix B

## Questions about demographics


UNIVERSITY OF TWENTE.

**Background information**

Before the questionnaire starts, first answer please the demographic questions.

What is your gender?

- ○ Male
- ○ Female
- ○ Other
- ○ I do not want to say that.

What is your age?

What is your nationality?

- ○ German
- ○ Dutch
- ○ Other, namely

---

Please indicate your occupation.

- ○ Pupil
- ○ Student
- ○ Employed full-time
- ○ Employed part-time
- ○ Unemployed
- ○ Other, namely

---

Please indicate your highest level of education you have finished.

- ○ Primary school
- ○ High school
- ○ Bachelor's degree
- ○ Master's degree
- ○ Doctorate
- ○ Other, namely

# Appendix C

## Questions about Watching Behaviour

**Part 1 - Streaming behaviour**

First, we will ask you some questions about your streaming behaviour. Please consider that we are in a special situation with **Covid-19 and remember for the entire survey that there are no right or wrong answers.** Try to also take into account your behavior before this time and to answer the questions by considering your behaviour in general and **not only in the past weeks.**

Which video-streaming service do you use the most on a weekly basis?

- ○ Netflix
- ○ Amazon Prime
- ○ Hulu
- ○ Disney Plus
- ○ Youtube
- ○ Videoland
- ○ Others
- ○ I do not use online-streaming services


How many days per week do you make use of online-streaming services?

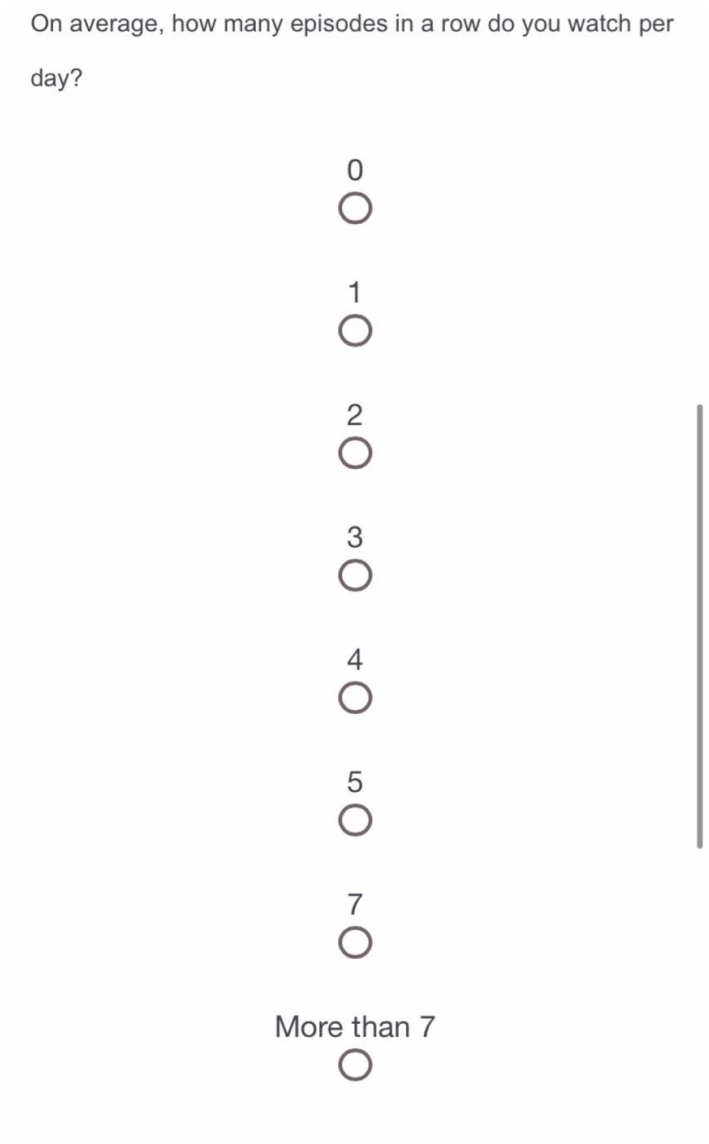
0 1 2 3 4 5 6 7

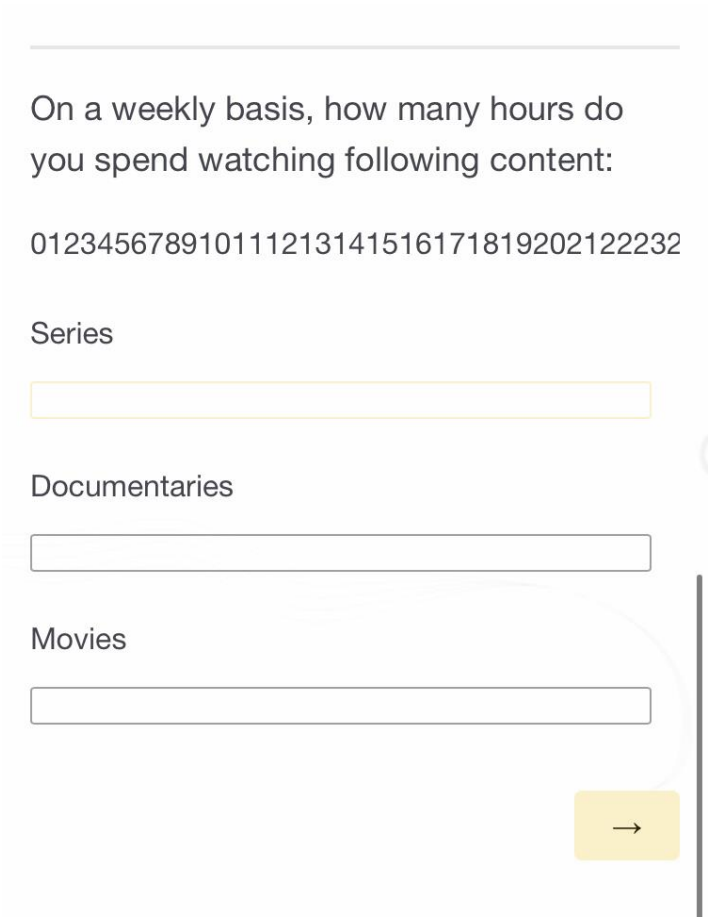
Days

On average, how many hours do you use online-streaming services on a daily basis?

0 1 2 3 4 5 6 7 8 9 10 11 12

Hours


On average, how many episodes in a row do you watch per day?
0
1
2
3
4
5
7
More than 7


On a weekly basis, how many hours do you spend watching following content:
0123456789101112131415161718192021222322
Series
Documentaries
Movies
→

# Appendix D

## Self-Regulation of Eating Behaviour Questionnaire

**Part 6 - Self-Regulation of Eating Behaviour**

In the following, you will see statements about your self-regulation regarding your eating behaviour.

**For the first question, please swipe the scale to the percentage that is most applicable to you.**

0 10 20 30 40 50 60 70 80 90 100

On a scale from 0 to 100% how healthy do you consider your diet?

**Please read the following statements and tick the boxes that most fit you.**

For the next few questions, please, understand that:

“Tempting foods” are any food you want to eat more of than you think you should.

“Eating intentions” refers to the way you are aiming to eat, for example you may intend to avoid tempting foods or eat healthy foods.

For each of the following statements, please decide honestly whether they apply to, using a scale from **1 (never) to 5 (always).**

I give up too easily on my eating behaviours.

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Often
- ○ Always

I am good at resisting tempting food.

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Often
- ○ Always

I easily get distracted from the way I intend to eat.

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Often
- ○ Always

If I am not eating in the way I intended to, I make changes.

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Often
- ○ Always

I find it hard to remember what I have eaten throughout the day.

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Often
- ○ Always