

LET'S WATCH ONE MORE EPISODE

*'The moderating role of personalised suggestions,
cliffhangers and the need for completion in relation
to binge watching'*



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Abstract

Since video-on-demand services became popular, media consumption changed significantly. Watching many episodes one after another whenever a viewer chose to watch became normal. A new phenomenon was born: binge watching. Despite its popularity, binge watching is not as harmless as many people might think. Binge watching is an unhealthy and addictive behaviour (Wadley, 2017; Exelman & Van den Bulck, 2017). Therefore, research into the factors that influence binge watching is of social relevance. The aim of this study is to investigate the factors that influence viewing behaviour, to find out what motivates and triggers users to continue watching or to stop watching. The theory of planned behaviour is used as a basis for the study. Furthermore, the moderating roles of personalised suggestions, cliffhangers and the need for completion is measured.

This study is performed by conducting an online questionnaire among Dutch people between 18 and 30 years old ($n = 278$). Therefore, the confidence level of this study was 90%. The Likert scale was used to measure the items used to test the hypotheses. This questionnaire included open questions to discover external factors that may have influenced this study and to gain insights for future research.

First, attitude, which is a component of the theory of planned behaviour, was found to be an important aspect that positively influence viewing behaviour. Second, perceived behavioural control was also found to positively influence viewing behaviour. Third, the moderating role of personalised suggestions on perceived behavioural control in relation to viewing behaviour was also partly supported. An additional analysis was performed which proved that cliffhangers and the need for completion lower perceived behavioural control. Furthermore, cliffhangers were found to positively influence the need for completion.

The results of this study provide insights into the motivations and triggers for binge watching. These results could be beneficial for future studies on changing binge-watching behaviour or on interventions related to binge watching.

Key words: binge watching, cliffhanger, need for completion, personalised suggestions, theory of planned behaviour

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1. Introduction

Due to technological developments, people's behaviour related to media consumption is changing all the time. Such changes also apply to traditional broadcast television consumption, which has changed to video-on-demand (VOD) services. These services offer viewers the opportunity to watch more episodes one after another (Shim, Lim, Jung, & Shin, 2018). Also, due to VOD services, users can choose when to watch television series and how long for (Schweidel & Moe, 2016).

The habit of watching more episodes in one session began in 1990 when TV recorders and DVD box sets were becoming popular (Flayelle, Maurage, Vögele, Karila, & Billieux, 2018). Until 2013, when platforms such as Netflix were introduced, series marathons were relatively unusual. However, nowadays Netflix airs some original shows that they release all at once so that users can watch all episodes whenever they want to and as quickly as they choose (Shim et al., 2018; Flayelle et al., 2018). Matrix (2014) and Roxborough (2014) call this rising popularity of platforms such as Netflix the 'Netflix effect'.

According to Steiner and Xu (2018), people feel the need to watch series till their conclusion, which is an important trigger for VOD service users to watch more episodes in one session. Brunson (2010) describes this habit as 'the complex pleasure of narrative, in which one is caught in the contradictory desire to find out what happens next and for the story not to end' (p. 66). The industry stimulates the desire to know what happens next by offering episodes ending with cliffhangers (Michelin, 2011; Li & Browne, 2006). Furthermore, by offering personalised suggestions and automatically starting new episodes VOD services make it easy for viewers to watch more (Mikos, 2016; Liang, Lai, & Ku, 2007). According to Flayelle et al. (2018), binge watching has become the normal way for consumers to watch television.

Binge watching is an addictive form of media consumption, and several studies link it to health problems. According to Wadley (2017) and Exelman and Van den Bulck (2017), binge watching negatively affects quality of sleep, a finding that is confirmed by Cox, Skouteris, Dell'Aquila, Hardy, and Ruherford (2012). It is also thought to cause isolation, depression and loneliness, which may be explained by the fact that the viewer becomes emotionally attached to the media content (Gutierrez,

2015; Brunsdon, 2010). Since many studies have proved that an excessive amount of media consumption is unhealthy, research into the aspects that increase the amount of time people spend watching series is of social relevance.

The aim of this study is to clarify what influences people to increase or decrease the amount of time they spend watching series on VOD services (e.g. Netflix, Videoland, Amazon Prime and Pathé Thuis). In the past, studies related to binge watching focussed on health issues and peoples attitude towards binge watching. However, the influence of attitude towards viewing behaviour on VOD services is not clarified yet. Furthermore, it is proved that VOD services enables their users to watch episodes one after another (Shim, Lim, Jung, & Shin, 2018). However, besides motivation and ability, a trigger is necessary to perform a behaviour (Fogg, 2009). Therefore, this study will focus in particular on motivations and triggers that influence viewing behaviour, which explains the theoretical relevance of this study. To explain peoples' motivation more clearly, the theory of planned behaviour (TPB) (Ajzen, 1985) is considered, as this theory explains the role of attitudes and intentions in behaviour. Furthermore, this study investigates in more depth triggers that influence viewing behaviour. Therefore, the moderating role of the need for completion, personalised suggestions and cliffhangers are analysed. This study provides insights into aspects that influence viewing behaviour on VOD services and forms the basis for future research into binge watching. More specifically, this study may form a basis for studies related to interventions and advertisements to change binge-watching behaviour. The research question addressed by this study is:

What are the predictors of binge watching, and what are the roles of personalised suggestions, cliffhangers and the need for completion?

2. Theoretical framework

In the following sections, viewing behaviour and the TPB (Ajzen, 1985) are explained. Furthermore, personalised suggestions, cliffhangers and the need for completion are explained in relation to viewing behaviour.

2.1 Viewing behaviour in the Netherlands

According to Aelen (2017), Netflix is the most popular VOD service in the Netherlands. At the time of writing, there are 2.4 million Netflix subscribers in the Netherlands, compared to 400,000 subscribers to Videoland (Marketing Tribune, 2018). In particular, the group known as millennials, which is comprised of those aged between 16 and 30 years old, watches the most films and series at home. In 2016, 61% of VOD service users in the Netherlands watched more than one episode at a time. This compares to a figure of 50% for 2015 (Aelen, 2017), which means that the amount of time people spent on watching series is increasing.

Watching many episodes one after another is called binge watching. Many researchers have offered definitions of binge watching. The first formal definition is provided by McNamara (2012), who defines binge watching as consuming more than three episodes of an hour-long drama or six half-hour episodes in one sitting. Perks (2015) and Petersen (2016) describe binge watching as watching two to four hours within one session. This study adheres to the definition of watching more than two episodes within a 1-day period, proposed by Aelen (2017).

Viewing behaviour is influenced by the industry itself, since the VOD service industry promotes binge watching, using it as a marketing tool (Jenner, 2015; Tryon, 2015). They know that people feel emotionally attached to the series they watch and feel the need to know what happens next (Mikos, 2016). Also, by automatically starting the next episode and offering suggestions (Mikos, 2016), VOD services encourage users to watch more. According to the Fogg Behaviour Model (FBM) (Fogg, 2009), high levels of motivation, ability and triggers stimulate people to engage in a particular behaviour. In other words, VOD services facilitate users' binge watching. To more clearly explain users' motivation to binge watch, the TPB (Ajzen, 1985) is considered.

2.2 The theory of planned behaviour

The TPB (Ajzen, 1985) is an extension of the theory of reasoned action (Ajzen & Fishbein, 1980) and is a significant predictor of intentional and actual behaviour. In relation to viewing behaviour, the TPB can explain what motivates people to binge watch. Since the TPB is used in many studies related to unhealthy and addictive behaviour, this theory is appropriate to consider for this study. In the following paragraphs, the components of the TPB, namely attitude, subjective norms and perceived behavioural control, are explained in relation to binge watching.

Attitude

The intention to perform a behaviour strongly depends on one's attitude towards that particular behaviour (Ajzen & Fishbein, 1980). According to Ajzen and Fishbein (1980) and Gass and Seiter (2016), attitudes towards certain kinds of behaviour are based on 'beliefs about the outcome' and 'evaluation of the outcome'. This means that people are more likely to engage in a particular kind of behaviour if they have a favourable attitude towards it (Ajzen & Fishbein, 1980; Gass & Seiter, 2016). According to Fogg (2009), a positive attitude towards a behaviour results in greater motivation to engage in this behaviour since it means an increase in pleasure, which is one of the core motivators of the FBM. Furthermore, Petrovici and Paliwoda (2008) claim that when someone's attitude to performing a particular behaviour is perceived as strong, their intention to perform this behaviour will also be strong.

Research on the effects of attitude on addictive and unhealthy behaviour indicates that attitude may be a predictor of intentional unhealthy and addictive behaviour, although this has not been proven for all types of unhealthy and addictive behaviour (Stacy, Bentler, & Flay, 1994). In relation to media consumption, Bonanno and Kommers (2008) state that attitude is a factor that influences media consumption in general. According to Steiner and Xu (2018), binge watching is perceived as liberating and entertaining, which indicates that the general attitude towards binge watching is positive. However, the influence of attitude on the amount of time people spent on watching series has not yet been clarified.

In sum, peoples' attitude towards binge watching is positive. Since attitude predicts several

kinds of unhealthy and addictive behaviour and influences media consumption in general, it is likely that attitude also predicts viewing behaviour. Therefore, the following hypothesis is formulated:

H1: A positive attitude towards binge watching increases the amount of time people spend watching series.

Subjective norms

According to Gass and Seiter (2016), subjective norms refer to the perception of what others think about one's behavioural tendencies. Ajzen (1991) argues that subjective norms are defined by the extent to which someone perceives social pressure from individuals or groups to engage in particular kinds of behaviour. Subjective norms are based on normative beliefs and a person's motivation to comply with their beliefs. Perceived social pressure is a base for normative beliefs, which influence people's intentions to engage in certain behaviours. The motivation to comply with their beliefs relates to a person's willingness to engage in a particular behaviour (Gass & Seiter, 2016).

In relation to binge watching, Shim and Kim (2018) argue that the recommendations of others influence people to watch more episodes or to begin watching new series. Furthermore, Mikos (2016) argues that watching series is perceived as a social activity. Also, Fogg (2009) claims that social acceptance is a core motivator for performing a behaviour, which indicates that the opinions and recommendations of reference groups are of great importance in relation to viewing behaviour.

In sum, subjective norms are likely to have an influence on viewing behaviour, since social acceptance is a core motivator for performing a behaviour. Furthermore, the recommendations of reference groups increase the number of hours people spent on watching series. Therefore, the following hypothesis is formulated:

H2: Positive subjective norms related to binge watching increase the amount of time people spend watching series.

Perceived behavioural control

Perceived behavioural control refers to a ‘facilitating condition’ and ‘self-efficacy beliefs’ and, thus, to the perceived level of difficulty involved in adopting a behaviour (Ajzen, 1985). Beliefs about resources and opportunities can account for perceived behavioural control (Godin, Valois, Lepage, & Desharnais, 2009). In relation to viewing behaviour, the ability to watch more series depends on several factors.

According to the FBM (Fogg, 2009), ability needs to be high for a person to engage in a particular behaviour and people need to be triggered. In relation to viewing behaviour, the industry minimises the effort required to watch more episodes by automatically starting the next episode and by making a large number of episodes from the same series available (Mikos, 2016; Van Doorn, n.d.). Furthermore, watching more episodes increases a viewer’s level of engagement with the series (Shim et al., 2018), making the viewer want to know what happens next (Mikos, 2016). In sum, VOD services enable users to binge watch. However, the influence of self-efficacy has not yet been clarified.

A significant amount of research has been undertaken on the relationship between perceived behavioural control and addictive and unhealthy behaviour. For example, Shimazaki, Bao, Deli, Uechi, Lee, Miura, and Takenaka (2017) have found that perceived behavioural control influences healthy food consumption. Furthermore, Kidwell, and Jewell (2003) have found that external control over the ability to perform a behaviour has a significant effect on intentions. However, research into the influence of perceived behavioural control on viewing behaviour has not yet been done.

Since VOD services enable users to watch many episodes one after another, external control over the ability to binge watch is high. Therefore, this study focuses on self-efficacy with regard to binge watching, which refers to the extent to which a viewer feels able to stop watching a series. The following hypothesis is formulated with regard to perceived behavioural control in relation to viewing behaviour:

H3: Low perceived behavioural control increases the amount of time people spend watching series.

2.3 Personalized suggestions and viewing behaviour

According to Ho and Tam (2005), personalisation means offering content that is relevant and interesting to an individual. Personalisation of content is beneficial for companies, as it enables them to fulfil their customers' needs (Saari, Ravaja, Laarni, Turpeinen & Kallinen, 2004). Liang, Lai and Ku (2007) call information systems that provide information and content to satisfy customers' needs recommendation systems. The mechanism that identifies users' preferences in order to offer the right content is called information retrieval (Liang, Lai & Ku, 2007). Kalyanarama & Sundar (2006), argue that personalised content is perceived as positive and it also creates a positive attitude towards the medium itself. However, offering personalised content needs to be conducted appropriately to have effective results (Liang, Lai, & Ku, 2007).

Video-on-demand services also offer personalised content to their customers by showing suggestions after a customer has finished watching an episode or series (Van Doorn, n.d.; Mikos, 2016). Offering suggestions means that viewers need to make less effort to watch more, which relates to the 'principle of least effort' (Liang, Lai, & Ku, 2007). It also relates to the FBM (Fogg, 2009), since personalised suggestions trigger and enable VOD service users to watch the next episode or series. The principle of least effort refers to minimising the effort required to gather information. However, this can lead to information overload where people get more information than necessary (Liang, Lai, & Ku, 2007).

In sum, personalised content is perceived as positive, and it generates positive attitude towards the medium itself. Therefore, it is likely that personalised suggestions influence the relationship between attitude and viewing behaviour. Furthermore, personalised suggestions reduce the effort required to watch more and trigger viewers to watch more. Therefore, it is likely that personalised suggestions influence the relationship between perceived behavioural control and viewing behaviour. The following hypotheses are formulated in relation to personalised suggestions and viewing behaviour.

H4a: The relationship between perceived behavioural control and viewing behaviour is moderated by personalised suggestions.

H4b: The relationship between attitude and viewing behaviour is moderated by personalised suggestions.

2.4 The need for completion and viewing behaviour

According to Steiner and Xu (2018), the need for completion is an important motivator that increases the number of episodes viewers watch. In this context, the need for completion refers to the need to watch a series to its conclusion. This is confirmed by Mikos (2016) and Brunson (2010), who state that VOD service users binge watch because they want to know what happens next. Van Doorn (n.d.) and Mikos (2016) have found that the VOD service industry facilitates this need for completion by automatically beginning another episode once the previous episode has finished. Furthermore, by eradicating advertising during an episode and by providing access to a large number of episodes from the same series, the industry takes advantage its customers' need for completion.

As this study focuses on triggers and motivations for binge watching, the moderating role of the need for completion on the relationship between perceived behavioural control and viewing behaviour is analysed. Since the need for completion seems to create the desire to continue watching (Steiner & Xu, 2018), a relationship with self-efficacy beliefs is likely. Therefore, the following hypothesis is formulated:

H5: The relationship between perceived behavioural control and viewing behaviour is moderated by the need for completion.

2.5 Cliffhangers and viewing behaviour

A cliffhanger is an unpredictable revelation with which the characters are confronted at the end of an episode (Michlin, 2011). This unpredictable end arouses viewers' curiosity, which stimulates cognitive elaboration to understand the revelation and predict future developments (Michelin, 2011; Li & Browne, 2006). Furthermore, Nussbaum (2017) states that a cliffhanger creates excitement and

makes the audience want to continue watching. Furthermore, a cliffhanger is used to generate a positive attitude towards the series and lure viewers back (Nussbaum, 2017). In relation to the FBM (Fogg, 2009), a cliffhanger can be described as a trigger to watch more episodes. In addition, Michelin (2011) states that, in traditional broadcast television, a dramatic twist before an advertising break is necessary to make sure that viewers continue watching, which indicates that people need to be triggered to watch the next episode.

Since a cliffhanger is used to generate positive attitude towards the series, it is likely to influence the relationship between attitude and viewing behaviour. Furthermore, it is a factor that makes people decide to watch more and that lures viewers back. Therefore, it is likely to have an influence on the self-efficacy beliefs of viewers, which indicates that cliffhangers also influence the relationship between perceived behavioural control and viewing behaviour. The following hypotheses are formulated in relation to cliffhangers:

H6a: The relationship between perceived behavioural control and viewing behaviour is moderated by cliffhangers

H6b: The relationship between attitude and viewing behaviour is moderated by cliffhangers.

2.6 Research model

Figure 1 presents the research model for this study. Viewing behaviour is the dependent variable in the study. Attitude, subjective norms and perceived behavioural control are the independent variables, and the need for completion, personalized suggestions and cliffhangers are the moderators.

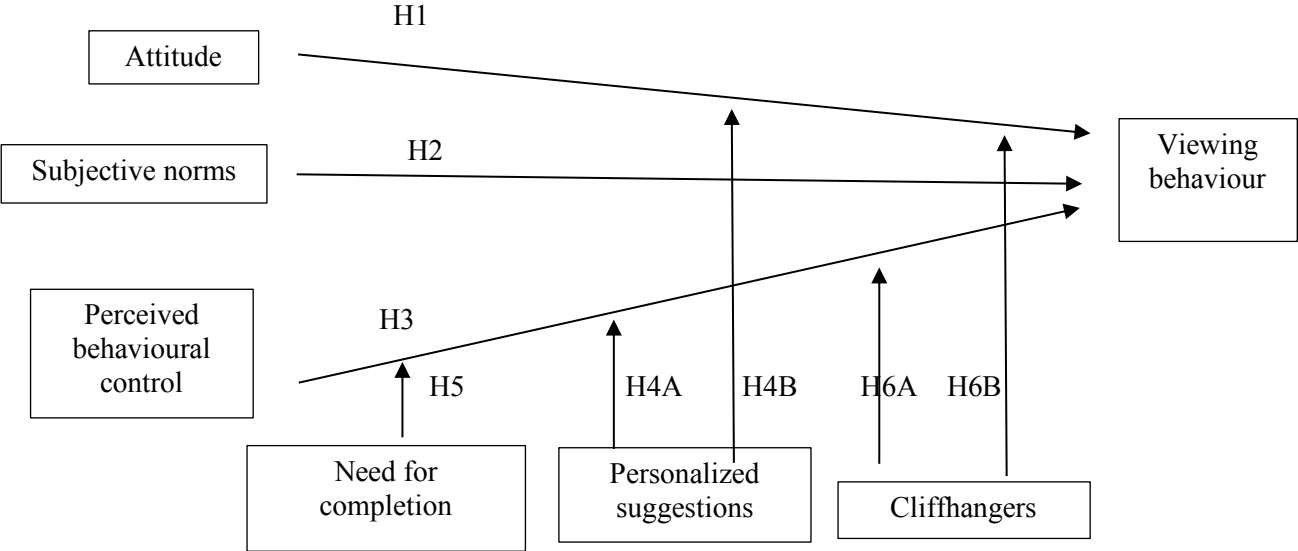


Figure 1: Research design

3. Method

The following section clarifies the method used in this study. This section explains how the study was conducted, who the participants were and the reliability of the analysis.

3.1 Design and procedure

This study analyses the extent to which personalised suggestions, the need for completion and cliffhangers influence viewing behaviour. The theory of planned behaviour is used as a basis for the study. The research was carried out by conducting a questionnaire. It was an exploratory piece of research, the model of which is displayed in Figure 1. The survey participants remained anonymous in order to prevent social desirability bias (Dooley, 2001). A snowball sampling technique was used to reach the target audience for the study. Since this technique does not guarantee a representative sample (Dooley, 2001), specific requirements to participate in the survey were specified beforehand to limit the amount of unrepresentative results.

In this study, binge watching is defined as watching three or more episodes one after another or watching at least one and half hours. The questionnaire is shown in appendix 1. The Dutch version was used for this study since all participants were Dutch.

3.2 Pre-test

A pre-test was necessary to assess whether participants would interpret all items of the questionnaire correctly. The pre-test was performed by distributing the questionnaire via e-mail to 10 people within the researcher's network that matched the target group and asking them to complete and evaluate all items. After this analysis, a second more in-depth pre-test was conducted. Three people in the researchers' network were asked face-to-face to evaluate the questionnaire in detail. After this pre-test, some items were changed.

3.3 Participants

The participants of this study were Dutch VOD service users. In the Netherlands, there are approximately 2,500,000 subscriptions to VOD services such as Netflix, Videoland, Pathé Thuis,

NLZiet and Amazon Prime. This study only focussed on people between 18 and 30 years old, since binge watching occurs most frequently within this age category (Aelen, 2017). Furthermore, this study focussed on both online and offline VOD service users. According to 'Centraal Bureau voor de Statistiek' (CBS) (2018), the total number of people between 18 and 30 years old in the Netherlands in 2018 is around 2,400,000. Taking this number as the total population size, the sample size for this questionnaire had to be 385 to have a confidence level of 95% and a margin of error of 5%.

The questionnaire was distributed via social media and among the researchers' personal network via e-mail. Furthermore, the researchers' colleagues were asked directly to fill in the survey. Also, 95 people were randomly selected and asked personally to fill in the questionnaire offline with a questionnaire form. There were 435 recorded responses to the survey. Of these, 102 were empty responses, and 11 were responses from people outside the age category. A further 41 responses were not finished, and 3 were not seriously filled in. These responses were not included in the analysis. In total, 278 responses were finished and within the age category and were therefore used for the analysis. This means that, with a margin of error of 5%, the confidence level for the questionnaire is 90%.

There were more female (57.2%) than male (42.8%) participants. Furthermore, 76.6% of the participants were students, and 19.4% were working. Table 1 presents an overview of the ages of the participants. The mean age was 22.74 ($SD = 3.03$), and most participants were between 18 and 20 years old. Table 2 shows the education level of the participants, which was generally high, since most participants have a VWO, HBO or university degree. Furthermore, most participants had an income level between €0 and €1000 per month which can be explained by the fact that the largest part of the participants were students.

Table 1

Age of the participants

Age category	Frequency	Percent
18	20	7.2
19	26	9.4
20	33	11.9
21	21	7.6
22	32	11.5
23	38	13.7
24	32	11.5
25	29	10.4
26	17	6.1
27	7	2.5
28	9	3.2
29	7	2.5
30	7	2.5
Total	278	100

Table 2

Educational level of the participants

Educational level	Frequency	Percent
MAVO	3	1.1
HAVO	27	9.7
VWO	73	26.3
MBO	31	11.2
HBO Bachelor	61	21.9
WO Bachelor	58	20.9

Educational level	Frequency	Percent
WO Master	24	8.6
PhD	1	.4
Total	278	100

Table 3

Income level of the participants

Income level	Frequency	Percent
€0–€1,000	169	60.8
€1,001–€2,000	46	16.5
€2,001–€3,000	17	6.1
€3,001–€4,000	2	.7
€4,001–€5,000	1	.4
€5,001 or more	2	.7
I do not want to share this	41	14.7
Total	278	100

3.4 Measurements and instrument

The Likert Scale, which is frequently used for studies relating to the TPB, was used for this questionnaire. According to Gass and Seiter (2016), the Likert scale is an excellent method for analysing explicit attitudes. A seven-point Likert scale was used for constructs 2–7. Appendix 1 details the items that were measured. The Dutch questionnaire was used for this study. Table 4 shows the Cronbach’s Alpha values for the items measured.

The first section of the questionnaire assessed the participants’ current and future viewing behaviour and asked which VOD services they used and how much time they spent using these services. This section started with open questions, including ‘Mention three important factors that increase the number of episodes you watch?’, to investigate external factors that may influence the

results of this study. Furthermore, the participants were asked questions about their viewing behaviour, such as ‘On average, how many hours did your sessions last in the last 4 weeks?’. The construct for measuring viewing behaviour was found to be reliable ($\alpha = .77$).

The second section measured participants’ attitudes towards watching series. This section clarified the extent to which the participants think it is good to watch three or more episodes per session. The extent to which attitude influenced the amount of time participants spent watching series was also interrogated in this section by asking participants to respond to the statement ‘I like to watch three or more episodes one after another’. All four items together formed a reliable scale ($\alpha = .75$).

The third section measured the influence of subjective norms on viewing behaviour. The influence of peer groups on the amount of time people spent watching series and the extent to which friends and relatives engaged in this form of behaviour were of particular concern. The scales used were adapted from Ajzen (2013). For example, participants were asked to evaluate the extent to which they agreed or disagreed with the statement ‘The opinions of my friends on watching three or more episodes are important to me’. To form a reliable scale, four items were removed. The items ‘The opinions of my family on watching three or more episodes are important to me’ and ‘the opinions of my friends on watching three or more episodes are important to me’ formed a reliable scale ($\alpha = .83$).

The fourth section analysed the relationship between perceived behavioural control and viewing behaviour. The extent to which the participants felt able to stop watching was of concern. Participants were asked to evaluate statements such as ‘I find it hard to stop watching when an episode has ended’ and ‘I often watch three or more episodes when I do not plan to do so’. The items formed a reliable scale ($\alpha = .83$).

The fifth section investigated whether the need for completion affects the relationship between perceived behavioural control and viewing behaviour. The aim of this section was to analyse whether the participants felt the need to watch a series till its conclusion. The statements used in this section were ‘When I am watching a series, I need to know how it ends’ and ‘I cannot stop watching a series until I have seen the last episode of the season’. The items formed a reliable scale ($\alpha = .80$).

The sixth section investigated whether personalised content influences the relationship between attitude and viewing behaviour. One statement used in this construct was: ‘I like it when my

platform recommends a series for me’. The items for this construct formed a reliable scale ($\alpha = .84$). Furthermore, this section also investigated the effect of personalised suggestions on the relationship between perceived behavioural control and viewing behaviour. One statement used to investigate this construct was: ‘I find it easy to continue watching due to the recommendations of my platform’. One item was deleted to form a reliable scale ($\alpha = .70$).

The seventh section analysed the effect of cliffhangers on the relationship between attitude and viewing behaviour. A statement that was used in this section was: ‘I am more positive about the series when the episodes have exciting endings’. One item was deleted to form a reliable scale ($\alpha = .74$). Furthermore, the effect of cliffhangers on the relationship between perceived behavioural control and viewing behaviour was also analysed. A statement that was used to investigate this was: ‘When episodes have exciting endings, I continue watching’. The items formed a reliable scale ($\alpha = .81$).

The last section of the questionnaire gathered demographic information including age, gender, income, educational level and daily activities. This was intended to provide insights into the relationships between demographic features and binge watching.

Table 4
Cronbach’s alpha

Scale	Items	N	α
Viewing behaviour	‘How many times did you watch three or more episodes in the last 4 weeks?’ ‘On average, how many episodes did you watch per session in the last 4 weeks?’ ‘On average, how many hours did your sessions last in in the last 4 weeks?’ ‘How many times do you expect to watch three or more episodes in the upcoming 4 weeks?’ ‘On average, how many episodes do you expect to watch per session in the upcoming 4 weeks?’ ‘On average, how many hours will your sessions last in the upcoming 4	6	.77

	weeks?’		
Attitude	‘Watching three or more episodes is fine for me’	4	.75
	‘I like to watch three or more episodes one after another’		
	‘It is no problem for me to watch three or more episodes one after another’		
	‘I think it is wise to watch less than three episodes’		
Subjective norms	‘The opinions of my family on watching three or more episodes are important to me’	2	.83
	‘The opinions of my friends on watching three or more episodes are important to me’		
Perceived	‘I find it hard to stop watching when an episode has ended’	4	.83
	‘I cannot always stop watching series after watching two episodes’		
	‘I often watch three or more episodes when I do not plan to do so’		
	‘I can easily stop watching series when I have seen two episodes’		
Need for Completion	‘When I am watching a series, I need to know how it ends’	4	.80
	‘I cannot stop watching a series until I have seen the last episode of the season’		
	‘When I want to see the end of the series, I will not stop before it’		
	‘I can easily stop watching series without knowing the end’		
Personalised suggestions - attitude	‘I like it when my platform recommends a series for me’	4	.84
	‘I am more positive about the platform when it recommends series for me’		
	‘It is valuable to me when my platform recommends series’		
	‘I judge my platform negatively when it recommends series for me’		
Personalised suggestions	‘I find it easy to continue watching due to the recommendations of my platform’;	3	.70
– Perceived behavioural	‘The series I watch are mostly recommendations from my platform’		
	‘I do not click on recommendations from my platform’		

control			
Cliffhangers	‘I am more positive about the series when the episodes have exciting	3	.74
– attitude	endings’		
	‘An exciting end of the episode makes the episode better’		
	‘Without an exciting end, I judge the series less positive’		
Cliffhangers	‘When episodes have exciting endings, I cannot stop watching’	4	.81
- Perceived	‘When episodes have exciting endings, I continue watching’		
Behavioural	‘The last scene of an episode convinces me to watch further’		
Control	‘Despite exciting endings, I can easily stop watching a series’		

3.5 Factor analysis

As this study contains nine components, a factor analysis was conducted to discover whether all items measured the right construct. Appendix 2 shows the factor analysis table. The factor analysis shows ten components, but only nine constructs were included. According to the scree plot, seven components have an eigenvalue above 1, which means this study is considered to have only seven components. This could be due to the fact that both cliffhangers and personalised suggestions are measured in two constructs: attitude and perceived behavioural control. The rotation matrix indicates that all items measured in a construct belong to that construct. However, some items are considered to measure other components as well. Item 6, which measures attitude towards viewing behaviour, belongs to component 5 with an extraction value of .738 and component 1 with an extraction value of .366. The second component also includes questions related to perceived behavioural control in relation to viewing behaviour. Furthermore, item 8, which measures attitude towards viewing behaviour, belongs to component 5 with an extraction value of .335 and component 9 with an extraction value of .428. Component 9, which this item belongs to, also includes questions analysing the moderating role of personalised suggestions with respect to perceived behavioural control. In addition, item 22, which measures the moderating role of personalised suggestions with respect to attitude belongs to component 2 with an extraction value of .303 and component 10 with an extraction value of .709. There are only two items which belong to component 10, both measuring the

moderating role of personalised suggestions. Item 23, which measures the moderating role of personalised suggestions with respect to perceived behavioural control, belongs to component 2 with an extraction value of .431 and component 9 with an extraction value of .472. Item 25, which measures the moderating role of personalised suggestions with respect to perceived behavioural control, belongs to component 9 with an extraction value of .684 and component 10 with an extraction value of .375. Furthermore, item 29, which measures the moderating role of cliffhangers with respect to perceived behavioural control, belongs to component 3 with an extraction value of .305 and component 6 with an extraction value of .676. Component 6 includes all other questions that measure the moderating role of cliffhangers with respect to perceived behavioural control. Component 3 includes all questions concerning the relationship between the need for completion and perceived behavioural control. The last item that measures two components is item 32, which belongs to component 1 with an extraction value of .415 and component 6 with an extraction value of .477.

3.6 Analysis

In total, there were 435 responses. However, not all responses were useful, since they were not all finished or within the age category. Therefore, only the cases that were finished and within the age category, which amounted to 278 cases, were selected for analysis.

The demographic features and viewing behaviour of the participants were analysed by conducting a frequency analysis. Questions on viewing behaviour included questions about which VOD services and genre the participants preferred and questions about the amount of time people spent watching series. The amount of time the participants spent watching series was measured with six questions asking about the participants current and future behaviour. First, they were asked about the number of binge-watching sessions they had engaged. Then they were asked about the length of their binge-watching sessions, by asking the number of episodes and hours they spent on watching series. Since Merikivi, Salovaara, Mantymaki, and Zhang (2017) found that the frequency of system use positively influence user satisfaction, it was necessary to measure viewing behaviour in more depth as it could influence the results of this study. By measuring the frequency of the binge-watching sessions and the length of the binge-watching sessions, it was possible to measure differences. An

index of these questions was made for both a regression analysis and a correlation analysis. The index assigned a score to the viewing behaviour of the participants. When participants watched three episodes or watching for 1.5 hours, they were considered to binge watch. Thus, the higher the score, the more the participants engaged in binge watching. The question asking about how many times the participants watched three or more episodes stayed the same. A mean variable for these questions was created for the analysis. Also, two separate regression analyses were done to measure differences between the number of binge watching sessions the participants engaged in and the length of the binge watching sessions.

To check if the data included outliers, a boxplot was constructed. This boxplot indicated that the data did include outliers, which meant the results were biased. Therefore, outliers were removed from the data. Creating z-score variables for each dependent variable used in the regression analyses meant that all cases with a z-score above 3 and less than -3 could be removed. For all regression analyses performed, the outliers were excluded.

Three regression analyses were conducted to measure the relationship between viewing behaviour and the components of the TPB. Furthermore, the moderating roles of the need for completion, personalised suggestions and cliffhangers were analysed using regression analysis. The creation of interaction variables enabled the moderating roles to be analysed. However, the mean variables measuring the influence of cliffhangers, the need for completion and personalised suggestions were also included in the regression analysis.

The first regression analysis is conducted on the total viewing behaviour index, which measures the relationships between the variables and both the number of binge-watching sessions the participants engaged in and the length of the binge-watching sessions. The second regression analysis was conducted on the question measuring the current amount of binge watching sessions the participants engaged in. The last regression analysis was conducted using the question measuring current viewing hours. By doing separate regression analyses, the difference between the number of binge-watching sessions and the length of the binge-watching sessions was found. Since there were differences found between the regression analyses, a correlation analysis was carried out. The total

viewing behaviour index was used for this analysis, and all cases with z-scores above 3 or less than -3 were removed to exclude the outliers.

The beginning of the questionnaire included open questions. Qualitative data was gathered to analyse whether external factors might have influenced this study or viewing behaviour in general. Also, the results of these questions gave insights for future research. To analyse the results, new scoring variables were made for all aspects that were mentioned in the open questions. For example, a new variable for cliffhangers was made, and each case in which 'cliffhanger' was mentioned, scored '1' in the scoring variable. This meant that the frequency of all aspects that were mentioned could be analysed.

Two additional regression analyses were conducted to discover underlying relationships between the independent variables. As the correlation analyses clarified a correlation between perceived behavioural control, the need for completion and cliffhangers, a new model was created and tested. In the first regression analysis, perceived behavioural control was used as the dependent variable. The dependent variable for the second regression analysis was the need for completion.

4 Results

This section presents the results of this study. It describes the participants' viewing behaviour and presents the results of the regression analyses and the correlation analysis. The results of the qualitative data are also shown, and a second research model is presented at the end of the section.

4.1 Viewing behaviour

Table 5 shows the number of hours per session that the participants spent watching series on VOD services in the preceding four weeks. The results show that 29.1% of respondents spent less than 1.5 hours and 70.9% spent more than 1.5 hours per session watching series ($M = 2.4$, $SD = 3.5$). Table 6 shows the number of episodes the participants watched in the preceding four weeks. Of all participants, 37.1% watched 2 episodes or less and 62.9% watched 3 or more episodes ($M = 4$, $SD = 5.2$).

Table 6 shows the VOD services used by the participants and the mean viewing hours for each VOD service per week. Netflix was the most popular among the participants (96.4%) with an average of 9.5 viewing hours ($SD = 15.5$). Videoland was the second most popular VOD service (16.9%) with an average of 8.1 viewing hours ($SD = 21.2$). The third most popular VOD service was RTL-XL (15.8%) with an average of 2.6 viewing hours ($SD = 3.7$). This indicates that some of the participants used more than one VOD service and there are more hours spent on Netflix and Videoland than all other VOD services.

Comedy was the most preferred genre among the participants (51.1%) with an average of 3.8 viewing hours per week ($SD = 4.7$). Action was the second most preferred (43.9%) with an average of 3.2 viewing hours per week ($SD = 3.3$). Drama was the third most frequently watched by the participants (36.7%) with a mean number of viewing hours of 3.3 per week ($SD = 3.6$). In fourth place, thrillers were preferred by 32.4% of the participants with an average of 2.9 viewing hours per week ($SD = 3.1$), and science fiction was the fifth most popular genre, which was preferred by 28.8% of the participants and was viewed for an average of 2.8 viewing hours per week ($SD = 3$).

Table 5

Viewing hours and episodes per session of the participants in the last four weeks

Viewing hours	Frequency	Percentage	Episodes	Frequency	Percentage
0	5	1.8	0	5	1.8
0.5	12	4.3	1.0	37	13.3
1.0	64	23.0	2.0	103	37.1
1.5	57	20.5	3.0	48	17.3
2.0	54	19.4	4.0	29	10.4
2.5	18	6.5	5.0	21	7.6
3.0	26	9.4	6.0	8	2.9
3.5	7	2.5	8.0	4	1.4
4.0	12	4.3	9.0	1	.4
4.5	5	1.8	10	1	.4
5.0	6	2.2	12	3	1,1
6.0	3	1.1	13	2	,7
6.5	1	.4	15 or more	16	5.8
7.0	2	.7			
7.5	1	.4			
10 or more	5	1.9			
Total	278	100.0	Total	278	100.0

Table 6

Percentage of service users per VOD and viewing hours

VOD service	Percentage	Viewing hours	<i>SD</i>
Netflix	96.4	9.53	15.45
Videoland	16.9	8.10	21.2
Pathé-Thuis	1.4	3.83	4.56
NLZiet	1.4	1.0	.0
Amazon Prime	1.1	3	1.41
RTL-XI	15.8	2.58	3.73
Film 1	1.1	2.33	.58
HBO	5.8	3.59	3.68

4.2 Factors that influence viewing behaviour

The construct measuring viewing behaviour included six questions about the participants' current and future viewing behaviour. These included questions about the number of binge-watching sessions engaged in by participants, which means the number of times the participants watched three or more episodes. Participants were also asked about the number of hours and episodes per session, which means the length of the binge-watching sessions. An index of these questions was made to analyse viewing behaviour. Also, two separate regression analyses were done to find the different influencers of the number of binge watching sessions engaged in and the number of hours spend per binge-watching session. The three regression analyses presented in this section showed the most significant results.

Table 7 shows the results from the regression analysis of the total viewing behaviour index. Thus, all six questions, including those on the length of the binge-watching sessions and the number of binge-watching sessions, were included. Model 1 in the regression analysis is significant ($F(3,262) = 27.522, p = .000$). Model 2 with the moderators added is also significant ($F(13,253) = 7.562, p = .000$).

However, model 2 is not an improvement on the first model ($R^2_{inc} = .041$, $F(10,253) = 1.442$, $p = .162$). The regression analysis shows that attitude and perceived behavioural control have an effect on viewing behaviour.

Hypothesis 1, which states that a positive attitude towards binge watching increases the amount of time people spend watching series, is significant for model 1 ($b = .468$, $t(263) = 7.210$, $p = .000$) and model 2 ($b = .460$, $t(253) = 6.835$, $p = .000$). Furthermore, perceived behavioural control is found to have an effect on viewing behaviour. Hypothesis 3, which states that low perceived behavioural control increases the amount of time people spend watching series, is significant for model 1 ($b = .143$, $t(263) = 2.524$, $p = .012$) and model 2 ($b = .168$, $t(263) = 2.586$, $p = .010$). For this regression, no moderating variable affects viewing behaviour. However, the normal variable that measures the influence of cliffhangers on attitude towards viewing behaviour is significant for model 2 ($b = -.190$, $t(253) = -2.417$, $p = .016$). Although, this does not support the moderating role of cliffhangers in relation to attitude towards viewing behaviour.

Table 7

Regression analysis of viewing behaviour, which includes current and future viewing behaviour, based on the number of binge-watching sessions and the length of the binge-watching sessions.

	Model 1			Model 2		
	B	SE	β	B	SE	β
Constant	-.863	.342		-.032	.555	
Attitude	.468***	.065	.418	.460***	.067	.411
Subjective Norms	.013	.044	.016	.007	.044	.008
Perceived behavioural control	.143*	.057	.146	.168**	.065	.172
Need for Completion for PBC				.056	.066	.055
P. Suggestions for ATT				-.004	.081	-.003
P. Suggestions for PBC				.073	.073	.063
Cliffhangers for ATT				-.190*	.079	-.148
Cliffhangers for PBC				-.098	.085	-.082
Need for Completion * PBC				.071	.082	.058
PS for ATT * Attitude				-.002	.061	-.002
PS for PBC * PBC				.109	.074	.085
Cliffhangers for ATT * ATT				-.085	.066	-.076
Cliffhangers for PBC * PBC				-.044	.083	-.036
Total R ²		.239***			.280	
F		27.522***			1.442	
ΔR^2		.230***			.243	

*Note: *p<.05, **p<.01, ***p<.001, ATT = Attitude, PBC = Perceived behavioural control, PS = Personalised suggestions*

Table 8 shows the results of the regression analysis of current viewing behaviour based on number of binge watching sessions the participants engaged in. For this regression analysis, model 1 is significant ($F(3,267) = 22.158, p = .000$). Model 2 is also significant ($F(13,257) = 5.843, p = .000$), but it is not an improvement on model 1 ($R^2_{inc} = .029, F(10,257) = .959, p = .480$). Hypothesis 1, which states that a positive attitude towards binge watching increases the amount of time people spend watching series, is significant for model 1 ($b = 1.037, t(267) = 6.307, p = .000$) and model 2 ($b = 1.019, t(257) = 5.935, p = .000$). Compared to the results in the regression analysis shown in table 7, attitude has more influence on viewing behaviour looking at the number of binge watching sessions. Furthermore, hypothesis 3, which states that low perceived behavioural control increases the amount of time people spend watching series, is significant for model 1 ($b = .358, t(267) = 2.504, p = .013$) and model 2 ($b = .467, t(257) = 2.804, p = .005$). Thus, compared to the first regression analysis perceived behavioural control also has more influence on viewing behaviour when looking at the number of binge watching sessions the participants engaged in.

Table 8

Regression analysis of current viewing behaviour based on the number of binge-watching sessions

	Model 1			Model 2		
	B	SE	β	B	SE	β
Constant	-3.200***	.868		-1.320	1.412	
Attitude	1.037***	.164	.373	1.019***	.172	.366
Subjective norms	.152	.111	.076	.165	.113	.082
Perceived behavioural control	.358*	.143	.147	.467**	.167	.192
Need for Completion for PBC				.095	.169	.038
P. Suggestions for ATT				.175	.209	.056
P. Suggestions for PBC				-.097	.188	-.034
Cliffhangers for ATT				-.314	.200	-.099

	Model 1	Model 2		
Cliffhangers for PBC		-.326	.218	-.111
Need for Completion * PBC		.122	.210	.041
PS for ATT * Attitude		-.015	.157	-.006
PS for PBC * PBC		.113	.189	.035
Cliffhangers for ATT * ATT		-.186	.169	-.067
Cliffhangers for PBC * PBC		-.183	.215	-.060
Total R ²	.199***		.228	
F	22.158***		.959	
Δ R ²	.199***		.029	

Note: *p<.05, **p<.01, ***p<.001, ATT = Attitude, PBC = Perceived behavioural control, PS = Personalised suggestions

Table 9 shows the results of the regression analysis of current viewing behaviour based only on the number of hours the participants spent watching series. In this regression analysis, model 1 is significant ($F(3,270) = 12.485, p = .000$), and model 2 is also significant ($F(13,260) = 4.460, p = .000$). Hypothesis 1, which states that a positive attitude towards binge watching increases the amount of time people spend watching series, is significant for model 1 ($b = .242, t(270) = 5.286, p = .000$) and model 2 ($b = .252, t(260) = 5.366, p = .000$). However, the influence of attitude on viewing behaviour is less than the regression analyses in table 7 and table 8. Furthermore, the variable measuring the moderating role of personalised suggestions on perceived behavioural control towards viewing behaviour is significant. Thus, hypothesis 4a, which states that the relationship between perceived behavioural control and viewing behaviour is moderated by personalised suggestions, is significant ($b = .123, t(260) = 2.377, p = .018$). Furthermore, the mean variable measuring the effect of need for completion in relation to perceived behavioural control has a significant effect on viewing behaviour ($b = .112, t(260) = 2.441, p = .015$). However, this does not support the moderating role of the need for completion on perceived behavioural control towards viewing behaviour.

Table 9

Regression analysis of current viewing behaviour based on number of hours spent watching series.

	Model 1			Model 2		
	B	SE	β	B	SE	β
Constant	.175	.243		.188	.389	
Attitude	.242***	.046	.326	.252***	.047	.340
Subjective norms	-.011	.031	-.020	-.025	.031	-.046
Perceived behavioural control	.032	.040	.049	-.023	.046	-.035
Need for Completion for PBC				.122*	.046	.167
P. Suggestions for ATT				-.072	.058	-.086
P. Suggestions for PBC				.021	.051	.028

	Model 1	Model 2		
Cliffhangers for ATT		-.010	.055	-.012
Cliffhangers for PBC		.013	.060	.016
Need for Completion * PBC		-.004	.057	-.005
PS for ATT * Attitude		-.007	.043	-.010
PS for PBC * PBC		.123*	.052	.145
Cliffhangers for ATT * ATT		-.043	.046	-.058
Cliffhangers for PBC * PBC		.061	.059	.075
Total R ²	.122***		.182*	
F	12.485***		.1.924*	
Δ R ²	.112***		.141*	

Note: *p<.05, **p<.01, ***p<.001, ATT = Attitude, PBC = Perceived behavioural control, PS = Personalised suggestions

In sum, the attitude positively influences viewing behaviour, since all regression analyses show significant results. Also, perceived behavioural control positively influences viewing behaviour, which is proved in the first and second regression analysis. However, the strongest effect of attitude and perceived behavioural control is found in the second regression analysis measuring the relationship with the number of binge watching sessions the participants engaged in. Furthermore, the moderating role of personalised suggestions in relation to perceived behavioural control towards binge watching is prove in the third regression analysis, measuring the effect on the number of hours spent on watching series. However, this result is very weak. Also, the explained variances of all regression analyses are weak.

4.3 Underlying relationships

Table 10 presents an overview of the correlation analysis that was conducted to find correlations between the variables. The total viewing behaviour index was used for this analysis and outliers were excluded. As well as the moderating variables, the mean variables were also included. A Pearson's r of .3 or higher indicates a positive correlation between variables, while a Pearson's r of -.3 or lower indicates a negative correlation between variables. According to the correlation analysis performed, there is a significant positive correlation between attitude and viewing behaviour ($r(267) = .469, p = .000$), which confirms the result of the regression analysis. A positive correlation also exists between attitude and perceived behavioural control ($r(267) = .361, p = .000$).

Furthermore, there is a positive correlation between perceived behavioural control and the mean variable measuring need for completion in relation to perceived behavioural control ($r(267) = .401, p = .000$). Also, a positive correlation is found between perceived behavioural control and the mean variable measuring cliffhangers in relation to perceived behavioural control ($r(267) = .472, p = .000$). Between the mean variable measuring cliffhangers in relation to perceived behaviour control and the mean variable measuring the need for completion in relation to PBC, there is also a positive correlation found ($r(267) = .485, p = .000$).

Between the mean variable measuring personalised suggestions in relation to attitude and the mean variable measuring personalised suggestions in relation to perceived behavioural control, a positive correlation is found ($r(267) = .516, p = .000$). Furthermore, there is a positive correlation found between the mean variable measuring cliffhangers in relation to attitude and the mean variable measuring cliffhangers in relation to perceived behavioural control ($r(267) = .415, p = .000$). Also, a correlation was found between the moderating variables cliffhangers in relation to perceived behavioural control and cliffhangers in relation to attitude ($r(267) = .337, p = .000$).

The last correlation is found between the moderating variables need for completion and cliffhangers. This is a correlation between the moderator cliffhangers in relation to perceived behaviour and the moderator need for completion in relation to perceived behavioural control ($r(267) = .561, p = .000$).

Table 10

Correlation matrix based on total viewing behaviour

	mean	sd	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Viewing behaviour	1.86	1.37													
2. Attitude	4.59	1.22	.469**												
3. Subjective norms	2.96	1.70	-.030	-.106											
4. PBC	3.73	1.40	.296**	.361**	-.013										
5. Nfc-pbc	3.61	1.36	.127*	.166**	.068	.401**									
6. Pers-att	5.03	1.09	.098	.167**	-.104	.190**	.111								
7. Pers-pbc	4.20	1.20	.147*	.200*	.028	.141*	.148*	.516**							
8. Cliff-att	4.86	1.07	-.090	.059	-.031	.141*	.283**	.170**	.098						
9. Cliff-pbc	4.61	1.16	.065	.188*	.023	.472**	.485**	.176**	.157*	.415**					

10.	Moderator	.40	1.12	.028	.006	.005	.031	.160**	.078	.096	.150*	.063				
	nfc-pbc															
11.	Moderator	.17	1.31	-.043	-.165**	-.026	-.043	.000	-.144	-.051	-.009	-.176**	.004			
	pers-att															
12.	Moderator	.14	1.06	.035	-.127*	.050	.053	.100	-.036	-.041	.077	.043	.170**	.278**		
	pers-pbc															
13.	Moderator	.06	1.22	-.090	-.112	.059	.000	.103	-.011	.035	-.121*	-.039	.253**	-.026	-.008	
	cliff-att															
14.	Moderator	.47	1.12	-.032	-.054	.024	.009	.071	.027	.045	.051	-.106	.561**	.103	.122*	.337**
	cliff-pbc															

Note: *p<.05, **p<.01, pbc = perceived behavioural control, att = attitude, cliff = cliffhanger, pers = personalised suggestions, nfc = need for completion

4.4 Hypotheses overview

Table 11 and Figure 2 shows an overview of the supported and rejected hypotheses. Two hypotheses are supported, one hypothesis is partly supported, and all others are rejected. Hypothesis 4a, which is partly supported, is only supported in the regression analysis of current viewing hours.

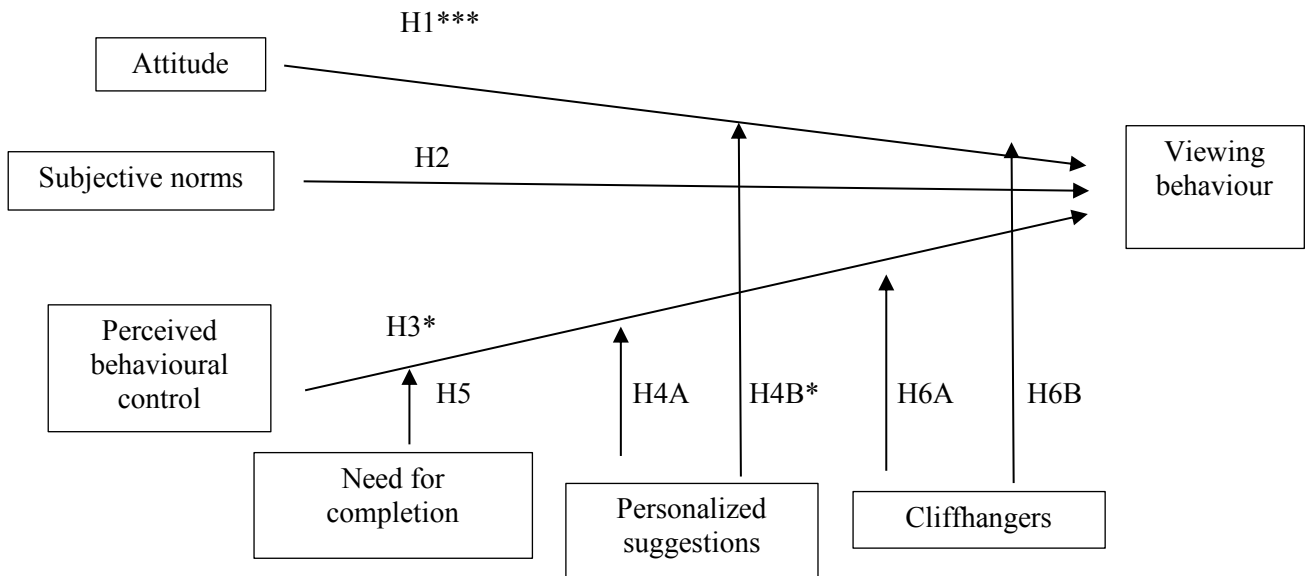


Figure 2, research design, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 11

Overview of the supported and rejected hypotheses

Hypothesis	Result
H1: A positive attitude towards binge watching increases the amount of time people spend watching series.	Supported
H2: Positive subjective norms related to binge watching increase the amount of time people spend watching series.	Rejected
H3: Low perceived behavioural control increases the amount of time people spend watching series.	Supported
H4a: The relationship between perceived behavioural control and viewing	Partly

Hypothesis	Result
behaviour is moderated by personalised suggestions.	supported
H4b: The relationship between attitude and viewing behaviour is moderated by personalised suggestions.	Rejected
H5: The relationship between perceived behavioural control and viewing behaviour is moderated by the need for completion.	Rejected
H6a: The relationship between perceived behavioural control and viewing behaviour is moderated by cliffhangers.	Rejected
H6b: The relationship between attitude and viewing behaviour is moderated by cliffhangers.	Rejected

4.5 Additional insights, qualitative analysis

At the beginning of the questionnaire, the participants were asked what influenced their viewing behaviour and how many episodes they considered binge watching. Table 11 shows the results for question 1: ‘How many episodes do you consider binge watching?’. Most participants (44.6%) stated that they consider three or more episodes binge watching. Only 6.5% considered two episodes or less binge watching. Almost half of the participants consider 4 or more episodes binge watching.

Table 12

Number of episodes participants consider binge watching.

Episodes	Frequency	Percent
1	1	.4
2	17	6.1
3	124	44.6
4	55	19.8
5	58	20.9

Episodes	Frequency	Percent
6	7	2.5
7	2	.7
10	9	3.2
13	1	.4
15	3	1.1
30	1	.4
Total	278	100.0

To the second question ‘What influences you to watch more episodes?’, 70.1% answered that emotional attachment was an important factor that influenced them. All answers related to the amount of excitement viewers perceive and their opinion of the actors and the storyline were considered emotional attachment. Furthermore, 50.7% stated that cliffhangers were important and 51.1% mentioned boredom or having nothing else to do was an influential factor that caused them to watch more series. Other answers concerned availability of the series (4.7%), the service provider automatically playing the next episode (9.7%), distraction from other tasks (11.9%) and the opinions and recommendations of relatives (5%).

To the third question ‘What influences you to watch less series?’, 64.4% mentioned bad series, no excitement and bad actors as influential factors that caused them to watch less. Also, 71.2% mentioned having no time or having other responsibilities, and 21.2% mentioned preferring short episodes and short storylines. Furthermore, 7.9% mentioned feeling responsible for their time or feeling that watching series is a waste of time, while 5% mentioned a bad internet connection or having to pay more for more episodes. Lastly, the lack of a cliffhanger (8.3%) and the availability of the series (6.5%) were also mentioned.

4.5 Another view of this study

Since the correlation analysis shows correlations between the independent variables, in particular perceived behavioural control, the need for completion and cliffhangers, a new model was created (Figure 3). Two more regression analyses were performed to find significant relationships between the independent variables. Table 13 shows the regression analysis with perceived behavioural control as the dependent variable, and table 14 shows the regression analysis with the need for completion as the dependent variable. Figure 3 shows the new model that is tested

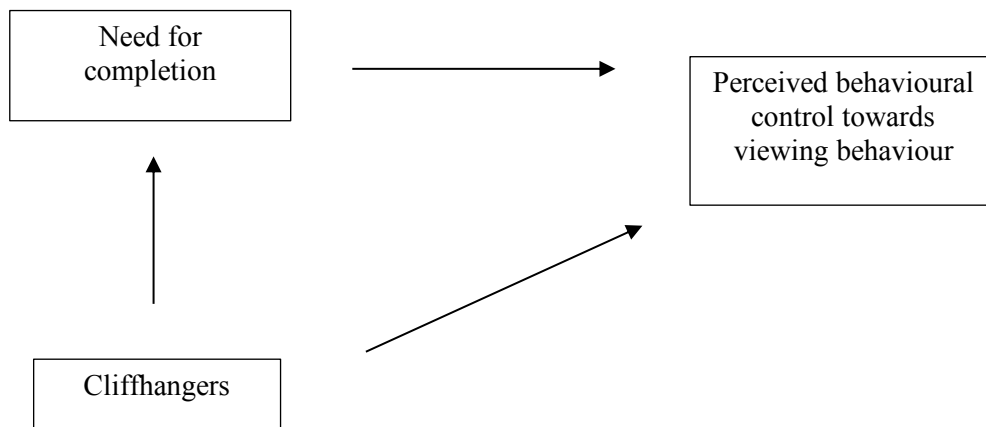


Figure 3, New model

The regression analysis in table 13 measures the relationship between cliffhangers and the need for completion. Model 1 is significant ($F(3,274) = 35.248, p = .000$). Also, model 2 is significant ($F(6,271) = 17.952, p = .000$). However, model 2 is not an improvement on model 1 ($R^2_{inc} = .006, F(3,271) = .752, p = .522$). The regression analysis shows the need for completion positively influence perceived behavioural control in model 1 ($b = .250, t(274) = 4.070, p = .000$) and in model 2 ($b = .248, t(271) = 3.956, p = .000$). Furthermore, cliffhangers positively influence perceived behavioural control ($b = .488, t(274) = 6.435, p = .000$) in model 1. Model 2 also shows a significant effect of cliffhangers on perceived behavioural control ($b = .503, t(261) = 6.538, p = .000$).

Table 14 shows the results of the regression analysis measuring the relationship between cliffhangers and the need for completion. Perceived behavioural control was also included in this regression analysis. Model 1 is significant ($F(3,274) = 38.116, p = .000$) and model 2 is also significant ($F(5,272) = 24.924, p = .000$). First, cliffhangers positively influence the need for completion in model 1 ($b = .529, t(274) = 7.854, p = .000$). Model 2 also shows a significant effect of cliffhangers on the need for completion ($b = .537, t(272) = 8.014, p = .000$). Second, perceived behavioural control also positively influence the need for completion in model 1 ($b = .268, t(274) = 4.070, p = .000$). Also in model 2, the effect is significant ($b = .220, t(274) = 3.947, p = .000$).

Table 13

Regression analysis with perceived behavioural control as the dependent variable

	Model 1			Model 2		
	B	SE	β	B	SE	β
Constant	1.211**	.376		1.184**	.382	
Need for Completion for PBC	.250***	.061	.241	.248***	.063	.239
Cliffhangers for ATT	-.129	.074	-.098	-.144	.076	-.110
Cliffhangers for PBC	.488***	.076	.402	.503***	.077	.414
Need for Completion * PBC				-.028	.080	-.023
Cliffhangers for ATT * ATT				-.055	.065	-.047
Cliffhangers for PBC * PBC				.112	.082	.090
Total R ²		.278***			.284	
F		35.248***			.752	
ΔR^2		.278***			.006	

Note: *p<.05, **p<.01, ***p<.001

Table 14

Regression analysis with the need for completion as the dependent variable

	Model 1			Model 2		
	B	SE	β	B	SE	β
Constant	.268	.366		.604	.363	
Perceived behavioural control	.228***	.058	.236	.220***	.056	.228
Cliffhangers for ATT	.151*	.071	.120	.156*	.071	.124
Cliffhangers for PBC	.388***	.074	.330	.397***	.074	.338
Cliffhangers for ATT * ATT				.122*	.060	.109
Cliffhangers for PBC * PBC				.072	.065	.060
Total R ²		.294***			.314*	
F		38.116***			3.918*	
ΔR^2		.294***			.020*	

Note: *p<.05, **p<.01, ***p<.001

5. Discussion

The aim of this study was to find out what influences people's viewing behaviour and what can lead to binge watching. The following sections discuss the results of this study. The limitations of the study are also presented.

The results of this study show that half the participants are binge watchers, as half of them admit watching three or more episodes of a series in one sitting. Regarding the VOD services used, Netflix is used by 96.4% of the participants, which is almost everybody. Videoland is the second most popular VOD service and RTL-XL is third. These results are in line with the current figures on VOD subscribers in the Netherlands, as Netflix has 2.4 million subscribers and Videoland has 400,000 (Marketing tribune, 2018). In addition, this study proved there is more time spent on Netflix and Videoland, compared to the other VOD services. Which indicate binge watching happens most often on Netflix and Videoland.

This study proves that a positive attitude increases people's viewing behaviour. In all three regression analyses, the positive influence of attitude on viewing behaviour was proven. This is in line with the results of Steiner and Xu (2018), who found that binge watching is interpreted as entertaining and liberating. However, the strongest influence was found in the second regression analysis, where the number of the binge-watching sessions was taken into account. Since Merikivi, et. al., (2017) mention user satisfaction is positively influenced by the frequency of use, the results of these studies are in line with each other. Furthermore, the qualitative results show that half the participants considered their viewing behaviour as binge watching when they watched four or more episodes in one sitting. However, this study adheres to the definition of watching more than two episodes within a 1-day period, proposed by Aelen (2017). Furthermore, almost half of the participants stated that they watched more than three episodes on average per sitting. These results indicate that the participants have a laid back attitude about binge watching and do not consider their behaviour to be threatening, which is also in line with Steiner and Xu (2018) and with a recent study by Rubenking and Bracken (2018).

The influence of perceived behavioural control on viewing behaviour is also proven in this study. This study focusses on the self-efficacy condition instead of the facilitating condition, since it has already been proven that VOD services enable their users to binge watch (Mikos, 2016). The strongest effect was found in the second regression analysis measuring the effect on viewing behaviour looking at the number of binge watching sessions. Also, the first regression analysis shows perceived behavioural control has a significant effect on viewing behaviour, however this effect is moderate. The regression analyses addressing the length of binge-watching sessions did not show significant results. These results indicate perceived behavioural control has more influence on the number of times the participants binge watch, instead of the length of the binge-watching sessions. Recently, Rubenking and Bracken (2018) also analysed whether viewers experienced a lack of self-control in relation to binge watching. However, this was not supported as VOD service users did not see their behaviour as threatening (Rubenking & Bracken, 2018). Since this study proves the effect of perceived behavioural control is stronger towards to the number of binge-watching sessions people engaged in, the frequency people engage in binge watching might influence the experienced lack of self-control. However, this is not statistically proven.

Furthermore, the influence of personalised suggestions on the relationship between perceived behavioural control and viewing behaviour is proven by the findings related to the current viewing hours of the participants. However, the relationship is moderate and only apparent in relation to current viewing hours. This also indicates a difference in the factors that influence the number of binge-watching sessions and those that influence the length of the sessions. Furthermore, Liang, Lai and Ku (2007) argue that personalised suggestions need to be presented appropriately to influence viewers. According to Mikos (2016), users need to be emotionally attached to the series they watch, which could influence the effects of personalised suggestions. Therefore, several aspects might have influenced this result.

The correlation analysis found eight correlations between independent variables, moderators and one between attitude and viewing behaviour. As the results from this study did not support all hypotheses, they provide interesting insights. The correlation between the need for completion, perceived behavioural control and cliffhangers was particularly interesting. This led to the creation of

a new model (Figure 2), which was tested to discover relationships between these variables. First, the need for completion and cliffhangers were found to have an influence on perceived behavioural control. Both the need for completion and cliffhangers lower perceived behavioural control and, consequently, peoples' self-efficacy beliefs. Furthermore, cliffhangers stimulate the need for completion, which can be explained by the fact that cliffhangers arouse curiosity and excitement (Michelin, 2011). Steiner and Xu (2018) have already proven that the need for completion is a strong motivator for binge watching, and the present study proves that this is due to the fact that the need for completion lowers perceived behavioural control. Another interesting result concerns the influence of perceived behavioural control towards the need for completion. This result indicates that a lack of self-control might cause people to watch a series until its conclusion, as it influences their need for completion. Also, looking at the qualitative results of this study cliffhangers stimulated the participants to continue watching. Drawing on the FBM (Fogg, 2009), the need for completion and cliffhangers could be interpreted as triggers that cause people to binge watch.

The qualitative data that was gathered in this study indicate that time appears to be an important aspect that influenced participants viewing behaviour. Other responsibilities or appointments are some of the reasons why participants stopped watching series. A lack of time is related to the ability factor (Fogg, 2009). Only a small number of participants felt that they wasted time by watching too many episodes and that this made them stop, which indicates that most participants did not consider binge watching a problem. This result is in line with the findings of Rubenking and Bracken (2018), who found that binge watching was not perceived as threatening. In relation to time, short seasons and episodes were also mentioned by the participants, which indicated that they preferred to go quickly through the episodes and seasons. Besides the relationship with time, this could also relate to the need for completion and, hence, the desire to know the ending of an episode or series. According to Horeck, Jenner, and Kendall (2018), series nowadays are shorter than those released on broadcast television in the past. This indicates that the industry is enabling customers to binge watch by offering shorter episodes. Another aspect mentioned by many participants is emotional attachment towards the series. The level of excitement, humour, identification and the likability of the actors are all mentioned.

Emotional attachment is a broad category which is of great importance in relation to viewing behaviour. This is supported by Rubenking and Bracken (2018).

5.1 Limitations

This study did not find evidence to support all the hypotheses, for which there may be several explanations. First, the study is very broad and measures eight variables including five moderating variables. The correlation analysis clarifies some relationships between the independent variables and moderators, which is one of the reasons that evidence was not found to support all the hypotheses. Second, there are more aspects that influence viewing behaviour than are covered in this study. According to the qualitative results in the study, emotional attachment appears to play an important role in relation to viewing behaviour. These results are supported by Mikos (2011) and Rubenking and Bracken (2018). Time also appears to be important. Therefore, these aspects may have influenced the results of this study. Third, this study measures participants viewing behaviour by asking about the number of binge-watching sessions they engaged in and the length of the binge-watching sessions. By conducting more regression analyses, differences were found between the way viewing behaviour was measured. A study by Merikivi et al., (2017) found evidence that the frequency of system use, in this case VOD services, influenced user satisfaction. Therefore, the ways in which participants were asked about their viewing behaviour may have influenced the results of this study.

Furthermore, most participants were students and highly educated. Therefore, this sample is not fully representative of the total population. Also, there are few participants between the age of 27 and 30, which is another limitation of this study. Unfortunately, the number of participants necessary to achieve a confidence level of 95% was not available. Rather than 385 participants, the study only had 278 participants.

5.2 Theoretical implications

Although some research has focussed on binge watching, there is scope for more research into this area. In the past, studies mostly focussed on health issues and attitude to binge watching. Furthermore,

studies have proven that the industry enables binge watching. Therefore, this study focussed on the motivations and triggers for binge-watching, which are core motivators in the FBM (Fogg, 2009)

From this study, it appears that a positive attitude towards binge watching is an important influential factor that increases people's viewing. Whereas past research proved the general attitude towards binge watching is positive (Steiner & Xu, 2018; Rubenking & Bracken, 2018), this study proves that this positive attitude increases the amount of time people spent of watching series. Furthermore, this study found differences between the influence of attitude looking on the number of binge-watching sessions engaged in and its influence on the length of the binge-watching sessions. Also, a laid-back attitude towards binge watching was apparent from the qualitative data but was not statistically proven.

This study has contributed relevant information on factors that influence viewing behaviour. Steiner and Xu (2018) already proved the need for completion strongly influence viewing behaviour. This study found evidence that the need for completion and cliffhangers strongly influence perceived behavioural control in relation to binge watching and that cliffhangers increase the need for completion. Therefore, this study contributed additional more in-depth information in relation to the need for completion.

5.3 Practical implications

This study has some practical implications. First, it proves that people's positive attitude towards binge watching strongly influences their viewing behaviour. This result indicates that binge watchers are not aware of health issues related to binge watching. Therefore, it could be helpful to make people aware of the health issues that binge watching may cause.

Second, by knowing what triggers people to binge watch, suitable interventions could be established. Cliffhangers, which influence the need for completion and perceived behavioural control, appear to be a particularly important trigger. Therefore, interventions related to cliffhangers might be helpful.

Third, from an entirely different perspective, this study could also be useful for the industry itself. Knowing that attitude is a strong predictor of binge watching, VOD services should encourage a

positive attitude among their target group. Also, by knowing what motivates their users to binge watch, they can more effectively select series to lure their viewers back.

6. Conclusion

The aim of this study was to answer the question: *What are the predictors of binge watching, and what are the roles of personalised suggestions, cliffhangers and the need for completion?*

Findings indicate that a positive attitude and low perceived behavioural control increases peoples viewing time. Especially the number of times people binge watch is strongly influences by attitude and perceived behavioural control. Furthermore, personalised suggestions were found to influence the relationship between perceived behavioural control and viewing behaviour. However, this result was moderate and was only proved looking at the number of hours people spent of watching series. This study also proves that the need for completion and cliffhangers influence perceived behavioural control. Furthermore, cliffhangers influence the need for completion. Also, low perceived behavioural control positively influences the need for completion.

In sum, attitude and perceived behavioural control predicts viewing behaviour, taken into account there is difference between the number of time people watch series, and the length of the binge-watching sessions. Furthermore, the role of personalised suggestions is very weak in relation to viewing behaviour. However, cliffhangers and the need for completion have an important role in relation to viewing behaviour.

7. Recommendations for future research.

This study did not find evidence to support most of the hypotheses. Furthermore, the influence of cliffhangers and the need for completion on perceived behavioural control was only proven in the second analysis, which indicates that there may be external aspects that could have caused bias in the results. First, important factors apparent in the qualitative data were emotional attachment towards series and the amount of time available to watch series. Research into emotional attachment has been carried out in the past. However, emotional attachment is a very broad and complex issue that involves excitement, humour and likeability of actors. Second, time was an important influence according to

the qualitative data in this study. Therefore, research into emotional attachment and time in relation to binge watching could be interesting.

This study asked participants about their viewing behaviour in two different ways. It asked about the number of binge-watching sessions engaged in and the length of the sessions. According to Merikivi et al. (2017), the frequency of binge watching indicates user satisfaction, which is why this study asked about the frequency and length of binge-watching sessions. The results of this study showed a stronger influence of attitude and perceived behavioural control when looking at the number of binge-watching sessions engaged in. Also, the influence of personalised suggestions on the relationship between perceived behavioural control towards viewing behaviour, was only significant looking at the number of hours the participants binge watch. Therefore, future research into the different motivations for binge watching that addressed both the frequency and length of binge-watching sessions would be interesting.

Another interesting aspect mentioned by the participants in relation to time was a preference for short episodes. According to Horeck, Jenner, and Kendall (2018), series are shorter nowadays compared to broadcast television series in the past. This study did not find statistical evidence that short episodes influence viewing behaviour, but this may be an important consideration for future research.

References

- Aelen, P. (2017, August 8). Binge watching. Retrieved December 18, 2017, from www.ensie.nl/paul-aelen/binge-watching
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckman (Eds.), *Action-control: From cognition to behavior* (pp. 11–39). Heidelberg, Germany: Springer.
- Ajzen, I. (1991). The Theory of Planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t)
- Ajzen, I. (2013). Theory of Planned Behaviour Questionnaire. Retrieved from www.midss.org/content/theory-planned-behaviour-questionnaire
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*. Englewood Cliffs, NJ: Prentice Hall.
- Bonanno, P., & Kommers, P. A. M. (2008). Exploring the influence of gender and gaming competence on attitudes towards using instructional games. *British Journal of Educational Technology*, 39(1), 97-109. doi:10.1111/j.1467-8535.2007.00732.x
- Brunsdon, C. (2010). Bingeing on box-sets: The national and the digital in television crime drama. In J. Gripsrud (Ed.), *Relocating television: Television in the digital context* (pp. 63-75). London, United Kingdom: Routledge.
- CBS. (2018, January 15). Statline. Retrieved January 11, 2018, from <https://opendata.cbs.nl/#/CBS/nl/dataset/37325/barv?dl=3981>
- Cox, R., Skouteris, H., Dell'Aquila, D., Hardy, L. L., & Rutherford, L. (2012). Television viewing behaviour among pre-schoolers: Implications for public health recommendations. *Journal of Paediatrics and Child Health*, 49(2), 108–111. <https://doi.org/10.1111/jpc.12041>

- Dooley, D. (2001). *Social Research Methods* (4th ed.). Upper Saddle River, NJ: Prentice-Hall.
- Exelmans, L., & Van den Bulck, J. (2017). Bedtime, shuteye time and electronic media: Sleepdisplacement is a two-step process. *Journal of Sleep Research*, 26(3), 364-370.
doi:10.1111/jsr.12510
- Flayelle, M., Maurage, P., Vögele, C., Karila, L., & Billieux, J. (2018, August 16). Time for a Plot Twist: Beyond Confirmatory Approaches to Binge watching *Research. Psychology of Popular Media Culture*. Advance online publication. <http://dx.doi.org/10.1037/ppm0000187>
- Fogg, B. J. (2009, April). *A behaviour model for persuasive design*. Retrieved January 11, 2018, from https://bjfogg.com/fbm_files/page4_1.pdf
- Gass, R. H., & Seiter, J. S. (2016). *Persuasion: Social influence and compliance gaining* (5th ed.). London, United Kingdom: Routledge.
- Godin, G., Valois, P., Lepage, L., & Desharnais, R. (1992). Predictors of smoking behaviour: An application of Ajzen's theory of planned behaviour. *Addiction*, 87(9), 1335-1343.
- Gutierrez, J. P. (2015, January 29). Feelings of loneliness and depression linked to binge-watching television. Retrieved November 12, 2017, from https://www.eurekalert.org/pub_releases/2015-01/ica-fol012615.php
- Horeck, T., Jenner, M., & Kendall, T. (2018). On binge watching: Nine critical propositions. *Critical Studies in Television: The International Journal of Television Studies*, 13(4), 499–504.
<https://doi.org/10.1177/1749602018796754>
- Jenner, M. (2015). Binge watching: Video-on-demand, quality-TV and mainstreaming fandom. *International Journal of Cultural Studies*, 20(3), 304-320. doi:10.1177/136787791 5606485
- Kalyanaraman, S., & Sundar, S. S. (2006). The psychological appeal of personalized content in Web portals: Does customization affect attitude and behavior. *Journal of Communication*, 56(1), 110–132.

- Kidwell, B., & Jewell, R. D. (2003). An Examination of Perceived Behavioural Control: Internal and External Influences on Intention. *Psychology & Marketing*, 20(7), 625-642.
Doi:10.1002/mar.10089
- Li, D., & Browne, G. J. (2006). The role of need for cognition and mood in online flow experience. *Journal of Computer Information Systems*, 46(3), 11-17.
- Liang, T., Lai, H., & Ku, Y. (2007). Personalized content recommendation and user satisfaction: Theoretical synthesis and empirical findings. *Journal of Management Information Systems*, 23(3), 45-70.
- Marketing tribune. (2018, February 6). Video On Demand blijft fors groeien, Verdubbeling videoland. Retrieved December 9, 2018, from <https://www.marketingtribune.nl/media/nieuws/2018/02/video-on-demand-blijft-groeien-videoland-verdubbeld/index.xml>
- Matrix, S. (2014). The Netflix effect: Teens, binge watching, and on-demand digital media trends. *Jeunesse: Young People, Texts Cult*, 6(1), 119–138.
- McNamara, M (2012) The side effects of binge television. Los Angeles Times. Retrieved May, 25, 2018, from <https://notices.californiatimes.com/gdpr/latimes.com/>
- Merikivi, J., Salovaara, A., Mäntymäki, M., & Zhang, L. (2017). On the way to understanding binge watching behavior: the over-estimated role of involvement. *Electronic Markets*, 28(1), 111–122. <https://doi.org/10.1007/s12525-017-0271-4>
- Michlin, M. (2011). More, more, more. Contemporary American TV series and the attractions and challenges of serialization as ongoing narrative. *Mise au point*, 3. DOI: 10.4000/map.927
- Mikos, L. (2016). Digital Media Platforms and the Use of TV Content: Binge Watching and Video-on-Demand in Germany. *Media and Communication*, 4(3), 154-161.
doi:10.17645/mac.v4i3.542

- Norman, P., & Conner, M. (2006). The theory of planned behaviour and binge drinking: Assessing the moderating role of past behaviour within the theory of planned behaviour. *British Journal of Health Psychology, 11*(1), 55-70. doi:10.1348/135910705X43741
- Nussbaum, E. (2017, June 19). The Power of the Television Cliffhanger. Retrieved November 30, 2018, from <https://www.newyorker.com/magazine/2012/07/30/tune-in-next-week>
- Perks, L. G. (2015). *Media marathoning. Immersions in morality*. Lanham, MD: Lexington Books.
- Petersen, T. G. (2016) To binge or not to binge: A qualitative analysis of binge watching habits of college students. *Florida Communication Journal, 44*(1), 77–88
- Petrovici, D. A., & Paliwoda, S. J. (2008). Reasoned action and food choice in a transitional economy. *Journal of East-West Business, 14*(3-4), 249-270. DOI:10.1300/J047v16n01_05
- Roxborough, S. (2014, February 20). Despite Netflix effect, foreign networks prefer to wait for series. Hollywood Reporter. Retrieved from <http://www.hollywoodreporter.com/news/netflix-effect-foreign-networks-prefer-681928>.
- Rubenking, B., & Bracken, C. C. (2018). Binge-watching: A suspenseful, emotional, habit. *Communication Research Reports, 35*(5), 381-391. DOI:10.1080/08824096.2018.1525346
- Saari, T., Ravaja, N., Laarni, J., Turpeinen, M., & Kallinen, K. (2004). Psychologically targeted persuasive advertising and product information in e-commerce. In *Proceedings of the 6th international conference on Electronic commerce* (pp. 245-254). New York, NY: ACM.
- Schweidel, D. A., & Moe, W. W. (2016). Binge watching and advertising. *Journal of Marketing, 80*(5), 1-19. doi:10.1509/jm.15.0258
- Shim, H., & Kim, K. J. (2018). An exploration of the motivations for binge watching and the role of individual differences. *Computers in Human Behavior, 82*, 94-100. doi:org/10.1016/j.chb.2017.12.032

- Shim, H., Lim, S., Jung, E. E., & Shin, E. (2018). I hate binge watching but I can't help doing it: The moderating effect of immediate gratification and need for cognition on binge watching attitude-behaviour relation. *Telematics and Informatics*, 35(7), 1971-1979.
<https://doi.org/10.1016/j.tele.2018.07.001>
- Shimazaki, T., Bao, H., Deli, G., Uechi, H., Lee, Y. H., Miura, K., & Takenaka, K. (2017). Cross-cultural validity of the theory of planned behaviour for predicting healthy food choice in secondary school students of Inner Mongolia. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 11, 497-501. doi:10.1016/j.dsx.2017.03.043
- Stacy, A. W., Bentler, P. M., & Flay, B. R. (1994). Attitudes and health behavior in diverse populations: Drunk driving, alcohol use, binge eating, marijuana use, and cigarette use. *Health Psychology*, 13(1), 73-85
- Steiner, E., & Xu, K. (2018). Binge watching motivates change : Uses and gratifications of streaming video viewers challenge traditional TV research. *Convergence: The International Journal of Research into New Media Technologies*, (2018). doi:10.1177/1354856517750365
- Tryon, C. (2015). TV got better: Netflix's original programming strategies and binge viewing. *Media Industry Journal*, 2(2), 104-116.
- Van Doorn, L. (n.d.). Kun je verslaafd raken aan een (televisie)serie? Retrieved January 22, 2018, from <https://www.bedrock.nl/verslaafd-aan-een-tv-serie/>
- Wadley, J. (2017, 14 August). Binge watching 'The Walking Dead?' You might feel like a zombie yourself. Retrieved December 24, 2017, from <http://ns.umich.edu/new/releases/25014-binge-watching-the-walking-dead-you-mightfeel-like-a-zombie-yourself>

Appendix 1, questionnaire

Questionnaire Dutch

Vanaf hoeveel afleveringen zie jij jouw kijkgedrag als binge watching? _____

Noem 3 belangrijke redenen die ervoor zorgen dat je meer afleveringen kijkt

- 1 _____
- 2 _____
- 3 _____

Noem 3 belangrijke redenen die ervoor zorgen dat je minder afleveringen kijkt

- 1 _____
- 2 _____
- 3 _____

Definitie Binge watching:

Binge watching betekent dus overmatig kijk gedrag. Binnen dit onderzoek wordt binge watching gedefinieerd als het kijken van 3 of meer afleveringen met een minimale duur van een half uur, of een kijkssessie van in totaal minimaal anderhalf uur.

Hoeveel uur kijk je gemiddeld per video on demand service, per week? *Vul in het tekstvak het aantal uren in, afgerond op halve uren. (Meerdere antwoorden mogelijk)*

- Netflix _____
- Videoland _____
- Pathé-Thuis _____
- NL-Ziet _____
- Amazon Prime Video _____
- RTL-XL _____
- Film 1 _____
- HBO _____

Hoeveel uur kijk je gemiddeld per genre, per week? *Vul in het tekstvak het aantal uren in, afgerond op halve uren. (Meerdere antwoorden mogelijk)*

- Science Fiction _____
- Thriller _____
- Actie _____
- Crime _____
- Avontuur _____
- Drama _____
- Erotiek _____
- Komedie _____
- Musicals _____
- Romantisch _____
- Documentaires _____
- Kinderfilms _____
- Animatie _____
- Western _____
- Historische drama _____
- Oorlogsdrama _____
- Biografieën _____
- Cabaret _____

- Tekenfilm _____
- Reality-tv _____
- Horror _____

Wat is je leeftijd?

Geslacht

- Man
- Vrouw

De volgende vragen gaan over je kijkgedrag in de afgelopen 4 weken

Hoe vaak is het voorgekomen dat je 3 of meer afleveringen achter elkaar hebt gekeken in de afgelopen 4 weken?

Hoeveel afleveringen heb je gemiddeld gekeken per keer in de afgelopen 4 weken?

Hoeveel uur heeft een kijk sessie gemiddeld voor jou geduurd in de afgelopen 4 weken? Rond af op halve uren.

De volgende vragen gaan over je kijkgedrag in de komende 4 weken

Hoe vaak verwacht je 3 of meer afleveringen achter elkaar te kijken in de komende 4 weken?

Hoeveel afleveringen verwacht je gemiddeld te kijken per keer in de komende 4 weken?

Hoeveel uur zal een kijk sessie gemiddeld voor jou duren in de komende 4 weken? Rond af op halve uren

De volgende vragen gaan over je mening ten aanzien van je eigen kijkgedrag en de mening van anderen in je omgeving hierover

Ik vind het kijken van 3 of meer afleveringen prima

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Ik kijk graag 3 of meer afleveringen achter elkaar

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Ik vind het geen probleem om 3 of meer afleveringen achter elkaar te kijken

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Minder dan 3 afleveringen achter elkaar kijken vind ik verstandig

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Mijn familieleden kijken regelmatig 3 of meer afleveringen achter elkaar

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

o n. v. t.

Mijn vrienden kijken regelmatig 3 of meer afleveringen achter elkaar

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

o n.v.t.

Mijn collega's kijken regelmatig 3 of meer afleveringen achter elkaar

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

o n.v.t.

De mening van mijn familie met betrekking tot het kijken van 3 of meer afleveringen vind ik belangrijk

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

o n.v.t.

De mening van mijn vrienden met betrekking tot het kijken van 3 of meer afleveringen vind ik belangrijk

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

o n.v.t.

De mening van mijn collega's met betrekking tot het kijken van 3 of meer afleveringen vind ik belangrijk

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

o n.v.t.

De volgende vragen gaan over de mate waarin je moeite hebt om te stoppen met het kijken van series

Ik vind het moeilijk om te stoppen met kijken als de aflevering is afgelopen

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Het lukt me niet altijd na 2 afleveringen te stoppen met kijken

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Ik kijk vaak 3 of meer afleveringen terwijl ik dit niet van plan was

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Het lukt mij prima om na 2 afleveringen te stoppen met kijken

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Als ik een serie kijk moet ik weten hoe de serie afloopt

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Ik kan niet stoppen met het kijken van de serie als ik de laatste aflevering van het seizoen nog niet gezien heb

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Ik wil het einde van de serie zien, eerder stop ik niet met kijken

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Ik kan prima stoppen met het kijken van een serie zonder dat ik het einde heb gezien

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

De volgende vragen gaan over uw mening met betrekking tot de aanbevelingen die je platform (bijvoorbeeld Netflix, Videoland etc.) je biedt.

Als mijn platform mij series aanbeveelt, vind ik dit fijn

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Ik ben positiever over mijn platform, als deze mij series aanbeveelt

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Een platform dat mij aanbevelingen biedt, is voor mij waardevol

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Ik beoordeel mijn platform negatiever als deze mij series aanbeveelt

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Omdat mijn platform me series aanbeveelt, kijk ik gemakkelijk verder

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Als mijn platform me geen andere series zou aanraden, is het stoppen met kijken van series voor mij gemakkelijker

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

De series die ik kijk, komen vaak voort uit de aanbevelingen van mijn platform

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Ik klik niet op de suggesties die mijn platform me aanbiedt

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

De volgende vragen gaan over in hoeverre het einde van de aflevering invloed heeft op je kijkgedrag

Ik sta positiever tegenover een serie als de afleveringen spannend eindigen

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Een spannend einde maakt de aflevering leuk

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Zonder een spannend einde, beoordeel ik de serie minder positief

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Spannende scènes aan het einde van de aflevering zijn voor mij niet noodzakelijk om de serie als positief te beoordelen

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Door het spannende einde van de aflevering kan ik niet stoppen met het kijken van de serie

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

De laatste scène van de aflevering zorgt ervoor dat ik de volgende aflevering kijk

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

De laatste scène van de aflevering trekt mij over de streep om door te kijken

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Ondanks een spannende eindscène, vind ik het gemakkelijk te stoppen met het kijken van de serie

Volledig oneens 1 – 2 – 3 – 4 – 5 – 6 – 7 Volledig eens

Demografisch

Wat is je hoogst genoten opleidingsniveau, waarvan je een diploma behaald hebt?

- mavo
- havo
- vwo
- mbo

- hbo bachelor
- wo bachelor
- wo master
- PhD

Wat is uw dagelijkse bezigheid?

- Student
- Werk
- Anders, namelijk _____

Wat zijn de 4 cijfers van je postcode?

Wat is uw netto inkomen?

- €0,- tot €1000,-
- €1001,- tot €2000,-
- €2001,- tot €3000,-
- €3001,- tot €4000,-
- €4001,- tot €5000,-
- €5001,- of meer
- Ik deel dit liever niet

Vul hieronder je mailadres in om kans te maken op één van de bol.com waardebonnen en/of om de resultaten van het onderzoek te ontvangen.

- Ja, ik wil graag de resultaten van het onderzoek ontvangen
- Ja, ik wil kans maken op de bol.com waardebon van €25,-

Questionnaire English

From which number of episodes do you consider your viewing behaviour as binge watching?

Mention three important reasons which increase the number of episodes you watch

- 1 _____
- 2 _____
- 3 _____

Mention three important reasons which decrease the number of episodes you watch

- 1 _____
- 2 _____
- 3 _____

Definition of binge watching

Binge watching means excessive viewing behaviour. In this study binge watching is defined as watching three or more episodes of at least half an hour, or a session of one and a half hour in total.

How many hours do you spend on watching series per video-on-demand services per week, on average?

- Netflix _____
- Videoland _____
- Pathé-Thuis _____
- NL-Ziet _____
- Amazon Prime Video _____
- RTL-XL _____
- Film 1 _____
- HBO _____

How many hours do you spend on watching series per genre per week, on average?

- Science Fiction _____
- Thriller _____
- Actie _____
- Crime _____
- Adventure _____
- Drama _____
- Eroticism _____
- Comedy _____
- Musicals _____
- Romantic _____
- Documentaires _____
- Childmovies _____
- Animation _____
- Western _____
- Historical drama _____
- War drama _____
- Biographies _____
- Cabaret _____
- Cartoon _____
- Reality-tv _____
- Horror _____

What is your age?

What is your gender?

- o Man
- o Woman

The following questions are about your viewing behaviour in the last 4 weeks.

How many times did you watch three or more episodes in the last 4 weeks

On average, how many episodes did you watch per session in the last 4 weeks?

On average, how many hours took your sessions in the last 4 weeks?

The following questions are about your expectations of your viewing behaviour in the upcoming 4 weeks.

How many times do you expect to watch three or more episodes in the upcoming 4 weeks

On average, how many episodes do you expect to watch per session in the upcoming 4 weeks?

On average, how many hours will your sessions take in the upcoming 4 weeks?

De following questions are about your opinion towards your own viewing behaviour and opinions from others related to viewing behaviour

Watching 3 or more episodes is fine to me

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

I like to watch 3 or more episodes one after another

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

It is no problem for me to watch 3 or more episodes on after another

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

I think it is wise to watch less than three episodes

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

My family watches three or more episodes after each other regularly

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

My friends watch three or more episodes after each other regularly

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

My colleagues watch three or more episodes after each other regularly

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

The opinions of my family on watching three or more episodes are important to me

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

o does not apply

The opinions of my friends on watching three or more episodes are important to me
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree
o does not apply

The opinions of my colleagues on watching three or more episodes are important to me
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree
o does not apply

The following questions are about the degree of effort you experience to stop watching

I find it hard to stop watching when an episode has ended
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

I cannot always stop watching series after watching two episodes
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

I often watch three or more episodes while I do not plan to do so
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

I can easily stop watching series when I have seen two episodes.
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

When I am watching series, I need to know how it ends
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

I cannot stop watching a series until I have seen the last episode of the season
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

When I want to see the end of the series, I will not stop before it
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

I can easily stop watching series without knowing the end
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

The following questions are about your opinion related to personalised suggestions video-on-demand services offer.

I like it when my platform recommends a series for me
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

I am more positive about the platform when it recommends series for me
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

It is valuable to me when my platform recommends series
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

I judge my platform negatively when it recommends series for me
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

I find it easy to continue watching due to the recommendations of my platform
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

If my platform would not recommend me series, it would be easier to stop watching
Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

The series I watch are mostly recommendations from my platform

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

I do not click on recommendations from my platform

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

The following questions are about the influence of the end of the episode

I am more positive about the series when the episodes have exciting endings

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

An exciting end of the episode makes the episode better

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

Without an exciting end, I judge the series less positive

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

It is not necessary to me that the episodes end with a lot of excitement to judge the series as positive

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

When episodes have exciting endings, I cannot stop watching

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

When episodes have exciting endings, I continue watching

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

The last scene of the episodes convinces me to watch further

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

Despite the exciting ends, I can easily stop watching a series

Totally disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Totally agree

Demographic

What is the highest level of education of which you have obtained a diploma

- mavo
- havo
- vwo
- mbo
- hbo bachelor
- wo bachelor
- wo master
- PhD

Daily activity

- Student
- Work
- Other _____

What is your postal code?

What is your net income?

- €0,- to €1000,-

- €1001,- to €2000,-
- €2001,- to €3000,-
- €3001,- to €4000,-
- €4001,- to €5000,-
- €5001,- or more
- I do not want to share this

Fill in your e-mail address if you want to win a bol.com voucher and/or to receive the results of this study

-
- Yes, I would like to receive the results of this study
 - Yes, I would like to win the bol.com voucher

Appendix 2, factor analysis

Scale	1	2	3	4	5	6	7	8	9	10
1. 'How many hours took your sessions in the last 4 weeks on average?'				.848						
2. 'How many hours will your sessions take in the upcoming weeks on average?'				.860						
3. 'How many episodes did you watch per session in the last 4 weeks on average?'				.776						
4. 'How many episodes do you expect to watch per session in the upcoming 4 weeks on average?'				.658						
5. 'Watching 3 or more episodes is fine to me'					.872					
6. 'I like to watch 3 or more episodes after each other'	.366				.738					
7. 'It is no problem to me to watch 3 or more episodes after each other'					.869					
8. 'I think it is wise to watch less than 3 episodes'					.335				.428	
9. 'The opinion of my family related to watching 3 or more episodes is important to me'								.910		
10. 'The opinion of my friends related to watching 3 or more episodes is important to me'								.881		
11. 'I have a hard time to stop watching when the episode has ended'	.734									
12. 'I can not always stop	.794									

watching series after watching 2 episodes'			
13. ' I often watch 3 or more episode while I did not planned to do so'	.731		
14. ' I can easily stop watching series when I have seen 2 episodes'	.813		
15. 'When I am watching series, I need to know how it ends'		.619	
16 'I can not stop watching the series when I did not see the last episode of the season'		.761	
17 'I want to see the end of the series, I will not stop earlier'		.771	
18. 'I can easily stop watching series without knowing the end'		.816	
19. 'I like it when my platform recommends me series'	.777		
20. 'I am more positive about the platform when it recommends me series'	.908		
21. 'It is valuable to me when my platform recommends me series'	.909		
22. 'I judge my platform negatively when it recommends me series'	.303		.709
23. 'I easily watch further due to the recommendations of my platform'	.431		.472
24. 'The series I watch are mostly the recommendations			.737

from my platform'			
25. 'I do not click on the recommendations from my platform'			.684 .375
26. 'I am more positive about the series when the episodes have exciting ends'		.836	
27. 'An exciting end of the episode makes the episode better'		.827	
28. 'Without an exciting end, I judge the series less positive'		.676	
29. 'Due to the exciting ends of the episodes, I can not stop watching'	.305	.676	
30. 'Due to the exciting ends of the episodes, I watch further'		.789	
31. 'The last scene of the episodes convince me to watch further'		.838	
32. 'Despite the exciting ends, I can easily stop watching the series'	.415	.477	

Scree Plot

