BINGE-WATCHING ADDICTION ON OVER-THE-TOP (OTT) AND ITS IMPACT ON ACADEMIC PERFORMANCE AMONG UNDERGRADUATE STUDENTS

Dzaa Imma Abdul Latiff, Ahmad Syakir Salman Salleh @Abdul Latif, Wan Anis Aqilah Megat Zambri, Suhaila Kamal & Muhammad Nabihan Abu Bakar

Faculty of Communication and Media Studies,
Universiti Teknologi MARA, (UiTM), Cawangan Negeri Sembilan, Kampus Rembau
Jalan Kampung Pilin, 71300 Rembau, Negeri Sembilan, Malaysia

Corresponding author: dzaa17@uitm.edu.my

Abstract

The rise of video-on-demand in the streaming industry has contributed to binge-watching. Binge-watching can be defined as viewing two or more episodes of a series consecutively. The scenario of binge-watching has definite benefits and disadvantages for viewers. Binge-watching, due to its highly immersive nature, carries the risk of addiction, potentially resulting in a loss of control. Many studies have been conducted in discussion of mental health issues but less on students' learning performance. This study surveyed 162 undergraduate students via purposive sampling using a 25-item instrument adapted from previous research on binge-watching addiction (BWA) and academic performance. The BWA Questionnaire, comprising 20 items across four domains which are Dependency, Avoidance, Craving, and Anticipation, were used along with academic performance items on a five-point Likert scale. Scores were categorized as low, moderate, and high levels of binge-watching. Data was analysed using multiple regression. The results show that Dependency (β=.00, p>0.05), Craving (β=.07, p>0.05), and Anticipation (β=.01, p>0.05) have insignificant relationships towards academic performance. This indicates that increased Dependency, Craving, and Anticipation of binge-watching do not lead to any significant changes in academic performance. However, Avoidance (β=.35, p<0.001) had a significant positive relationship, suggesting that students may downplay or hide their binge-watching habits, which in turn affects academic performance. Studies on binge-watching suggest that if done in moderation it is not dangerous. Thus, moderate behaviour on binge-watching is harmless and can be integrated into a balanced healthy lifestyle if students use it in a regulated manner without adversely affecting other sides of life.

Keywords: Binge-watching Addiction, Over-The-Top (OTT), Students, Academic Performance

Introduction

During the COVID-19 pandemic, binge-watching became a prevalent impression as individuals occupied more time at home due to movement control order (MCO) and social distancing measures. Besides limited choices for entertainment and societal interaction, many of us went to Over-the-top (OTT) streaming services like Netflix, Astro Go, Viu, iFlik, and many more to pass the time.

OTT delivers video, audio, and other media such as voice and chat services and is transmitted to different platforms or devices through the internet. The services are delivered via the internet by a service provider that is not accountable for the signal's transmission to the end-user, and users will log on to the OTT services using the open internet protocol or public internet (Abdul Latiff et al., 2022).

The accessibility of complete seasons of TV programmes and an extensive selection of movies or TV series made it easy for individuals to utilize large volumes of content at one time. This indicated the increased screen time, adjustments in viewing patterns, and the acceptance of specific shows that suited cultural standards during the pandemic.

Meanwhile, with the prospect of video on demand in streaming industry, the binge-watching phenomenon has risen and emerged. According to Flayelle et al., (2017), binge-watching can be defined as "watching two or more episodes of the same TV series in a row". Matos and Ferreira (2020) also explained that "binge-watching refers to watching videos for an extended period in one sitting" (p.1337). The new standard of watching TV series or movies appears to be interesting for a younger audience group. As reported by Chastin et al. (2019), their recent studies showed that the main audience of streaming OTT services was under the age of 25. Riddle et al. (2017) also claimed that binge-watching is very familiar among university students. Thus, it is interesting to investigate university students as the target group for the binge-watching field in this study.

Currently, OTT has become widespread due to its unique attributes such as the content varieties, cost efficiency, less effort, and the technology used on the OTT services, which makes it easy to stream the completed season of TV shows at once. The scenario of binge-watching has definite benefits and disadvantages for viewers. Some studies argue that binge-watching is harmful to the well-being of a person's health, as it contributes to addiction (Chaudhary, 2014). This may cause demands to contend that binge-watching is a form of entertainment that satisfies the consumer's needs. Starosta et al. (2021) suggest that binge-watching, due to its highly immersive nature, carries the risk of addiction, potentially resulting in a loss of control. Many studies have been conducted in discussion of mental health issues but less on learning performance. The growth of OTT services and its utilization by students consistently for long hours, disregarding academic performance or learning, is crucial. Hence, the present study aims to explore as below:

Research Objective: To examine the relationship between binge-watching addiction and its impact on academic performance among undergraduate students.

Hypotheses:

H_1: There is a significant relationship between high Binge-Watching Addiction (*Dependency*) and academic performance.

H_2: There is a significant relationship between high Binge-Watching Addiction (*Avoidance)* and academic performance.

H_3: There is a significant relationship between high Binge-Watching Addiction *(Craving)* and academic performance.

H_4: There is a significant relationship between high Binge-Watching Addiction (*Anticipation)* and academic performance.

Theory

The Theory of Planned Behaviour (TPB) by Ajzen (1991) can be used to identify and theoretically alleviate binge-watching addiction by directing to the factors affecting intentions and behaviours related to extreme TV viewing. TPB proposes that behaviour is mostly controlled by intentions, which will influence attitudes toward the behaviour, subjective norms, and perceived behavioural control.

a) Attitude towards binge-watching

Attitude implies an individual's positive or negative estimation of a specific behaviour, which refers to binge-watching. If someone observes binge-watching as entertaining, relaxing, or favourable, their attitude will be positive, leading to a stronger intention to engage in that behaviour. The positive insight supports their intention, as they perceive binge-watching as a rewarding and satisfying activity. According to Ajzen (1991), attitude exhibits a person's evaluation and beliefs about the likely effects of executing a behaviour. Before determining to engage in a particular action, individuals often assess the perceived benefits and costs correlated with it. Therefore, when someone holds a positive attitude toward a certain behaviour, they are more prone to intend to perform that behaviour. Research has

identified significant relationships between attitude and behavioural intention in several domains, such as internet purchasing (Ilham & Kamariah, 2012), online banking (Safeena et al., 2013), halal food purchasing (Ali et. Al., 2017), healthy menu selection (Kim et. al., 2018), healthy nutrition (Ates, 2019) and stay-at-home orders during COVID-19 (Latiff & Kamal, 2021). In a similar vein, attitude towards binge-watching played an important role in shaping a person's intention to engage in this behaviour. The more positively they assess binge-watching, the more likely they are willing to plan and participate.

b) Subjective norms

Subjective norms refer to a person's perception of social pressure in engaging or avoiding a specific behaviour such as binge-watching. If a person believes that significant others such as family, friends, or peers criticise of a binge-watching attitude, that person may feel less inclined to participate in the behaviour, resulting in lower behavioural intentions. Ajzen (2002) asserted that subjective norms imply beliefs regarding whether important referents (e.g., family, close friends, coworkers) think the person should or should not perform a behaviour. A person's motivation to participate in a certain action is often influenced by the perceived expectations of those they consider important. In the context of binge-watching, if individuals identify that their social circle observes the behaviour as acceptable or even favourable, they may intend to binge-watch. Conversely, if binge-watching is lowered, the intention will reduce. Past studies demonstrate significant relationships between subjective norms and behavioural intentions. For instance, positive relationships have been discovered in studies such as hiring job for individuals with disabilities in Malaysia (Magdalene et al., 2015), using mobile health services (Zhang et al., 2019), maintaining a healthful diet (Close et al., 2018), and accordance with "Safer at Home" orders during the COVID-19 pandemic (Michael et al., 2020). Consequently, the subjective norm of an existing study can be an important factor for binge-watching addiction.

c) Perceived behavioural control

Perceived behavioural control implies an individual's belief in their capability to control or regulate a particular behaviour towards binge-watching. If a person believes that he or she has high level of control over her or his viewing habits, the person is more likely to develop strong intentions to control or limit the binge-watching behaviour. Ajzen (1991) describes perceived behavioural control as the perceived ease or difficulty of performing a behaviour, which reflects both past experiences and anticipated obstacles. It involves the degree to which individuals feel they can control the internal and external factors that either accelerate or hinder a specific action. Han et al. (2010) defined behavioural control as an individual's perception of their capability to control the resources and conditions required to perform a behaviour. Significantly, perceived behavioural control will not only influence intentions but can precisely predict real behaviour, exclusively when the individual perceives distinguished autonomy in decision-making. Past studies have shown that when people lack the essential resources, their perceived control moderates, which can weaken behavioural intentions, even if their attitudes and subjective norms are favourable (Han et al., 2010). Many experimental evidence supports the role of perceived behavioural control in expecting intention across various contexts, including internet banking (Safeena et al., 2013), healthy nutrition (Ates, 2019), and compliance with COVID-19 "Stay at Home" orders (Sumaedi, 2020). Thus, in the context of binge-watching addiction, perceived behavioural control offers as a crucial subject in clarifying an individual's intention to either remain or restrict the behaviour.

d) Behavioural intention

Behavioural intention refers to the possibility or willingness of a person to engage in a specific behaviour. According to Ajzen (1991), behavioural intention is one of the strongest predictors of real behaviour, suggesting how much determination a person is willing to invest in order to perform that behaviour. This intention signals the strength of an individual's motivation and commitment toward taking action. The greater the intention, the more probable the behaviour will be conveyed. For example, in the situation, a strong behavioural intention created by attitude, subjective norms, and perceived behavioural control can substantially control whether a person retains in binge-watching or makes efforts to control it.

Meanwhile, the Binge-Watching Addiction study by Forte et al. (2021), reported four detected factors

Dependency, Anticipation, Craving, and *Avoidance* that can be related to TPB. These factors comprise behavioural characteristics that cause binge-watching addiction.

a) Dependency
This aligns with the perceived behavioural control aspect, as it reflects the difficulty in controlling the urge to binge-watch. The Dependency scale reveals the central descriptions of addiction, such as compulsiveness, which explains engaging in repetitive activities although they are inconsistent with one's comprehensive objectives (Luigjes et al., 2019) and loss of control. This scale reports the challenges linked to household tasks, sleep, and work. Example: "Do you stay up late or sacrifice sleep to continue watching TV series, even when you know it might affect your responsibilities the next day?"

b) Anticipation
Forte et al. (2021) define anticipation as the psychological excitement and expectation before participating in binge-watching effectively, the positive emotional build-up tied to planning the next session. When people look forward to streaming an online video series, they tend to link the activity with relaxation, reward, and emotional satisfaction. This positive emotional anticipation outlines their overall estimation of binge-watching as entertaining and enjoyable, which is an important part of attitude or subjective norms in TPB. Example: "Do you regularly search for trailers, updates, or discussions about upcoming TV series you're interested in?".

c) Craving
Craving refers to the strong desire and emotional urge to participate in binge-watching, often motivated by the satisfaction it creates and its role in mood regulation. It reveals the affecting aspect of the behaviour, mostly the degree of enjoyment and emotional support experienced during streaming. Furthermore, craving can be linked to interactive obstacles that develop from selecting binge-watching over social communications or responsibilities. It also aligns with attitude in TPB. Example: "Do you feel a strong urge to watch a TV series when you're unable to do so?

d) Avoidance
It illustrates the inclination to moderate its effects on everyday life, indicating users to explain their behaviour. The avoidance scale "regards the lack of awareness about the problematic behaviour and the tendency to minimize it" (Rosli & Mahudin, 2024). Using binge-watching to avoid real-life problems may be linked to coping mechanisms. This reinforces a positive attitude (e.g., "binge-watching makes me feel better"), which increases the intention for binge-watching addiction. Thus, avoidance relates to attitude in TPB.

Binge-watching Addiction
The term "binge" is already linked to radical and detrimental attitudes such as binge eating or binge drinking. Therefore, the term "binging" naturally conveys harmful implications, concerning the consumption of an extreme or radical amount in a moment. This negativity, together with its flaws, has led to a critique of the word "binge-watching" (Pittman & Sheehan, 2015). Binge-watching addiction describes the compulsive or impetuous and extreme consumption of several television episodes, series or video content in one session or sitting, frequently at the cost of other behaviours or tasks. This behaviour can indicate harmful outcomes, such as sleep deficiency, social isolation, and disregard for individual and professional obligations (Flayelle, 2018).

The addiction is portrayed by a psychological belief in the performance of binge-watching, where people feel a strong craving to resume streaming although the negative impact on it could happen in their everyday lives. It is regularly directed by the distribution of dopamine, a neurotransmitter correlated with satisfaction and incentive, which emphasizes the behaviour and makes it demanding to the end. Studies have proven that binge-watching can initiate concerns of responsibility, fear, and sadness, specifically when it affects daily life. The elevation of streaming programs and the readiness of whole periods or sequences at once has contributed to the incidence of this behaviour, compelling it a significant involvement in modern media utilization (Flayelle, 2018).

Binge-watching has developed a routine for many, remarkably among students. The more students are involved in binge-watching, the more likely they are to retain this behaviour in the future, possibly indicating to habit (Panda & Pandey, 2017). This maintains the idea that streaming television for prolonged periods can enhance a system of dependency. In fact, 60 percent of binge-watchers convey experiencing addiction to the television or video shows they are streaming, mainly due to the suggestion of binge-watching with anxiety relief, which is emphasized in diverse ways. While the behaviour of streaming is certainly reinforced as a type of relaxation, the compression and replication that regularly follow binge-watching are harmfully reinforced.

The Binge-Watching Addiction study by Forte et al. (2021), reported four detected factors *Dependency, Anticipation, Craving*, and *Avoidance*. These factors comprise behavioural characteristics that may cause binge-watching addiction. The Dependency scale reveals the pivotal descriptions of addiction, such as compulsiveness which explains engaging in repetitive activities although they are inconsistent with one's comprehensive objectives (Luigjes et al., 2019) and loss of control. This scale reports the challenges linked to household tasks, sleep, and work. The Craving finds the enjoyment gained from streaming, tied to mood control. It creates strong desires and a deep craving to stream, besides interpersonal difficulties that may result from binge-watching (Antons et al., 2020). Meanwhile, Anticipation and Avoidance measurements investigate additional components, frequently overlooked in binge-watching studies, that will influence problematic behaviour and the possibility of obsession. Anticipation refers to the desire to anticipate the activity, which motivates its persistence over time. Avoidance illustrates the inclination to moderate its effects on everyday life, indicating users to explain their behaviour. Inspecting all these characteristics provides a thorough inspection of binge-watching behaviours, assisting in detecting individual aspects beyond motivating factors, as observed by other scholars. This has important proven implications for future involvements (Bokhan et al., 2013).

Learning performance

Yassine and Abdelghanie (2024) examined the online streaming behaviours of university students and their influence on academic commitment. The research reported that students who spent less time on academic programs with 50% of the respondents saying that streaming online content distracted their studies. Motivation to study, along with the level of attention, interest, and passion, are the main mechanisms of academic performance. Higher levels of academic performance provide better educational improvement. However, academic performance can be interrupted by several distractions. Such as being distracted from their academic assessment by consuming extended periods, typically 3-8 hours, streaming online content.

The effect of streaming various episodes of TV shows or series in one session has been correlated to prospective negative consequences especially on academic performance, especially among students. Previous studies revealed that binge-watching can consume important time that students could then spend on learning, submitting assignments, or participating in learning activities (Mehmood & Taswir, 2013). Some studies claimed that students binge-watching late at night, leading to poor sleep conditions and decreased cognitive tasks during the daytime, which influence focus and studying retention. Moreover, streaming one episode and continuing to the next episode can develop addictive, leading to procrastination and interruptions in completing educational tasks (Akin & Iskender, 2011). The prolonged screen time could also lower students' capability to focus on college work, declining overall efficiency. However, binge-watching in moderation or control and used as a tool of leisure or incentive might not have terrible outcomes, depending on a student's self-guideline and regulation. Balancing students' relaxation, leisure, and study time is the key to sustaining good educational performance. Therefore, it is important to study students' responses to binge-watching to identify whether they are categorized as low, moderate, or high binge-watching behaviour.
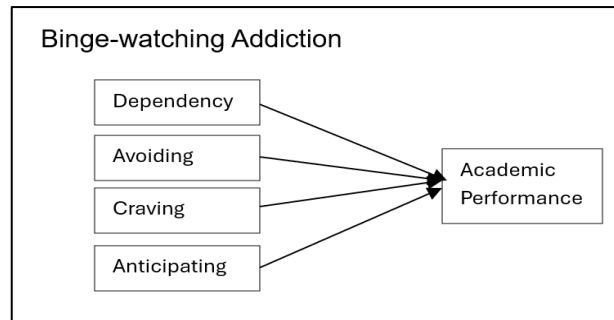
Figure 1: Research Framework

As shown in Figure 1, the dependent variable (academic performance) is influenced directly by the independent variables which are represented by dependency, avoiding, craving and anticipating.

Methodology

A cross-sectional, online survey was conducted among undergraduate students at the faculty of Communication and Media Studies in Universiti Teknologi MARA (UiTM), Rembau, Negeri Sembilan. This method was chosen for its practicality, efficiency, and ability to reach a larger and more diverse sample. The online survey was designed to be anonymous and voluntary, which was believed to reduce the pressure on respondents to provide socially desirable answers. Neutral wording was used in questions to avoid leading responses. The study was conducted in June 2024 using a purposive sampling technique among Diploma and Degree students. Purpose sampling technique, also called "judgment sampling, is the deliberate choice of a participant due to the qualities the participant possesses" (Bernard, 2002). The researchers intentionally select respondents based on their specific characteristics or knowledge that relevant to the main study. In this case, students who ticked more than two TV show episodes in a single sitting were identified as binge-watching. There were 1,051 full-time students according to UiTM's Student Information Management System (SIMs) as of March 2024. The data collection took about two months, and 162 online questionnaires were administered via Google Forms. Eight students ticked less than two episodes. Thus, eight were removed due to an invalid category of sample. Most of the students fall under binge-watching behaviour.

Instruments and Reliability

A 25-item survey instrument from past research studies on binge-watching addiction and academic performance was adapted by Forte el. al. (2021). The questions also included demography items. Respondents were asked about their binge-watching experiences on OTT services. Table 1 shows the allocation of instruments, items, reliability test, standardized item loadings, average variance extracted (AVE), composite reliability (CR), and Cronbach alpha (CA). The Binge-Watching Addiction Questionnaire by Forte et al. (2021) was used to measure respondents' binge-watching behaviour. The scale has 20 items divided into four domains (dependency, avoidance, craving, and anticipation), each with a five-point Likert-response scale of 0 = never, 1 = rarely, 2 = sometimes, 3 = often, and 4 = always

The independent variable such *Dependency* scale refers to habitual binge-watching and failure to influence the behaviour. Some of the items are "*Do you happen to find yourself saying "Just one more episode and I'll turn it off" when you watch a TV series?*"; "*Do you happen to neglect college assignments to spend more time watching TV series?*". This scale has 4 items with total possible scores of 0-16, with 0-5 scores categorized as low, 6-11 (moderate), and 12-16 showing high binge.

Next, the *Avoidance* scale refers to the lack of awareness regarding the problematic behaviour and the inclination to minimize it. Items such as "*Do you happen to think that people overestimate the time you spend watching TV series?"; "Do you try to minimize or hide how much time you spend watching TV series?*". This scale has 4 items with total possible scores of 0-16, with 0-5 scores categorized as low, 6-11 (moderate), and 12-16 showed high binge.

Meanwhile, the *Craving* scale represents the "degree of pleasure and mood" while binge-watching. This scale integrated with the concept of craving, involving the estimation of the intense inclination to participate in binge-watching and the interpersonal concerns that result from it. The items such as "How many times do you find yourself diverting your attention from negative thoughts with the consoling thought of your favourite TV series?"; "Do you often feel depressed, irritable, or nervous when you can't watch a TV series?". This scale has 9 items with total possible scores of 0-36, with 0-12 scores categorized as low, 13-24 (moderate), and 25-36 representing high binge.

Lastly, the *Anticipation* scale defines the search for signals connected to the contents of the TV episodes, even when the action is not implemented, such as "*Are you interested in new releases TV series?*"; "*Do you often read reviews and opinions about new TV series?*". This scale has 3 items with total possible scores of 0-12, with 0-4 scores categorized as low, 5-8 (moderate), and 9-12 high binge.

The *academic performance* in this study represents the dependent variable and has five items. Instruments were adapted by Prakasha et al. (2023) with a five-point Likert scale of 0 = strongly disagree, 1 = disagree, 2 = slightly disagree, 3 = agree, and 4 = strongly agree. The items such as "*I can balance my academic work and binge-watching OTT content; My marks in exams are not affected when spent more time binge-watching OTT*". Total possible scores are 0-20, with 0-6 scores categorized as low, 7-13 (moderate), and 14-20 showing high academic performance, respectively.

Table 1: Instruments, standardized item loadings, CA values AVE, and CR

Factor	Instrument	Item	Item loadings ≥.60	*CA ≥.70 Pilot Test	*CA ≥.70 Field Test	*AVE ≥.5	*CR ≥.6
Binge-Watching Addiction: *Dependency*	Forte et al. (2022)	D1	.65	.74	.83	.60	.85
		D2	.75				
		D3	.84				
		D4	.79				
Avoidance	Forte et al. (2022)	A1	.61	.75	.82	.51	.80
		A2	.86				
		A3	.71				
		A4	.65				
Craving	Forte et al. (2022)	C1	.62	.79	.81	.52	.90
		C2	.83				
		C3	.60				
		C4	.75				
		C5	.74				
		C6	.85				
		C7	.73				
		C8	.65				
		C9	.64				
Anticipation	Forte et al. (2022)	AN1	.80	.71	.82	.66	.86
		AN2	.92				
		AN3	.70				
Academic Performance	Prakasha et al. (2023)	L1	.64	.78	.80	.53	.85
		L2	.62				
		L3	.74				
		L4	.82				
		L5	.81				

Before distributing the questionnaires to students, researchers consulted three lecturers from Faculty of Communication and Media studies as subject matter experts to ensure the items were suitable for the study's objectives. A pilot study was conducted with 30 undergraduate students to assess clarity, consistency, and relevance of the items. The results of the reliability analysis, shown in Table 1, indicate

that the reliability criteria were met after making some adjustments or rewording items to prevent misunderstandings. Each item's factor loading should be .6 or higher and positive. Conducting Average Variance Extracted (AVE) for each construct is crucial to measure validity. Most factor loadings were above .6, with AVEs for all constructs exceeding .5 and Composite Reliabilities (CRs) exceeding .6

Meanwhile, the normality test using Skewness and Kurtosis has been tested. Referring to Nieslony et al. (2021) stated that Skewness must fall between -3 and +3 and Kurtosis between -7 and +7. Every variable in the study shows values within the designated range as below: *Dependency* (-.47, -.50), *Avoidance* (1.04, -.51), *Craving* (.74, -1.04), *Anticipation* (.40, -.75), and *Academic Performance* (.27, -1.01). In order to examine the appropriateness of factor analysis, the Kaiser-Meyer-Olkin (KMO) has been conducted and shows (.73, $p<.01$) which suggests that values between .7 to .8 indicate the data for each variable is moderate. The data were entered and analysed using SPSS version 24.

Results and Discussion

Table 2 shows the demographic profile of undergraduate students. Majority of the respondents were female (67%), ages less than or equal to 19 showed the highest responses (35%) and year two students are among the biggest respondents (45%). Most students are from the Diploma programme. They preferred a handphone/tablet as their main device to stream TV shows (65%) and stream when they're free (77%). The respondents choose the free OTT program (62%) rather than the subscription type. Majority of them like to stream between one to three hours (77%) of TV shows per day.

Table 2: Demographics and characteristics of students (n=182)

Items		Frequency (%)
Gender	Male	53 (33)
	Female	109 (67)
Age	<19	57 (35)
	20-22	54 (34)
	23-25	41 (25)
	>26	10 (6)
Program	Diploma	95 (59)
	Degree	67 (41)
Years of study	Year 1	60 (37)
	Year 2	73 (45)
	Year 3	29 (18)
What device do you use to binge-watch?	Smart TV	24 (15)
	Handphone/Tablet	105 (65)
	Laptop	33 (20)
When binge-watch?	Anytime when I am free	125 (77)
	During the study period (apart from the semester break)	32 (20)
	During semester break only	5 (3)
Mostly used Type of OTT	Subscribe	61 (38)
	Free	101 (62)
Hour of usage of OTT per day	less than one hour	20 (12)
	1-3 hour	77 (48)
	4-6 hour	61 (38)
	More than 6 hours	4 (2)

Table 3 shows the categories of scores for binge-watching addiction and academic performance. To categorize binge-watching behaviour as low, moderate, or problematic (high), the items were divided into three categories: low, moderate, and high, based on the total score of each item. Overall, the Binge-Watching Addiction items reported moderate binge-watching with *Dependency* reported 103 (64%) responses (M=2.15, SD=.59), *Avoidance* with 93 (57%) responses (M=1.78, SD=.61), *Craving* with

104 (64%) responses (M=1.8, SD=.55) and *Anticipation* stated 93 (57%) responses (M=1.94, SD=.65). Meanwhile, *Academic Performance* showed high responses which indicate that students' performance on learning is high with 145 (90%) responses and therefore shows less affected by binge-watching addiction behaviour. The low responses showed zero as most of the students responded that binge-watching did not affect their learning performance.

The researcher used multiple regression analysis to predict the relationship between binge-watching addiction behaviour such as dependency, avoidance, craving, and anticipation and in what way these variables influence students' academic performance. In order to conduct the multiple regression analysis, preliminary assessments were completed to ensure no violation of the assumptions of "normality, linearity, multicollinearity, and homoscedasticity". As the researchers previously mentioned, the normality test using Skewness and Kurtosis identified as normal distribution. The linearity test confirmed that the relationship between the independent and dependent variables was shown by a straight line. The multicollinearity test, with a Variance Inflation Factor (VIF) below 10, specified a moderate level of multicollinearity (correlations between variables must be below 10). Homoscedasticity was confirmed by a consistent and random scatter of residuals across all levels of the predicted values (independent variables).

Table 3: Categories of scores for study variables (n = 162)

Variable	Indicator	Range of total Possible scores	n (%)	Mean	SD
(Binge-Watching Addiction)	1. Low	0-5	17 (10)	2.15	.59
Dependency	2. Moderate	6-11	103 (64)		
	3. High	12-16	42 (26)		
Avoidance	1. Low	0-5	53 (33)	1.78	.61
	2. Moderate	6-11	93 (57)		
	3. High	12-16	16 (10)		
Craving	1. Low	0-12	49 (30)	1.80	.55
	2. Moderate	13-24	104 (64)		
	3. High	25-36	9 (6)		
Anticipation	1. Low	0-4	39 (24)	1.94	.65
	2. Moderate	5-8	93 (57)		
	3. High	9-12	30 (19)		
Academic Performance	1. Low	0-6	0	3.00	.31
	2. Moderate	7-13	17 (11)		
	3. High	14-20	145 (90)		

To verify the model fit, the researchers analysed the R-square (Table 4), F-ratio, and significance value (Table 5). These steps were taken before running the multiple regression analysis to test the hypotheses. Meanwhile, the academic performance scale has been recorded in SPSS to change the values of items according to the scale of Binge-Watching Addiction.

Table 4 shows the model summary of this study where R squared value is .17 which explains 17% of total variance of academic performance (dependent variable). In general, the higher the R-squared, the better the model fits the data. However, according to Ozili (2022), acceptable values and minimum values of at least 0.10, R squared are acceptable in social science empirical modelling when some or most explanatory variables are statistically significant.

Table 4: Modal Summary for R-square value obtained.

		Modal Summary		
Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	.40[a]	.17	.14	.41

a. Predictors: (Constant): Dependency, Avoidance, Craving, Anticipation

In addition, the researchers used the ANOVA test in Table 5 as an analysis of variance to find common means between different groups of variables. As can be seen from the table, the F-ratio value is 7.72, a significant value (p<0.001). Thus, this model is significant.

Table 5: Anova Table

Modal Summary

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5.41	4	1.35	7.72	.000[b]
Residual	27.51	157	.18		
Total	32.92	161			

a. Dependent Variable: Academic Performance
b. Predictors: (Constant), (BWA: Dependency, Avoidance, Craving, Anticipation)

A multiple regression analysis using the enter method was conducted to predict whether binge-watching addiction behaviour on OTT influences academic performance. Overall, the model was significant, $F(4, 157) = 7.72$, p<0.001, explaining 17% ($R2 = .17$) of the variance in the outcome variable. Thus, Table 6 shows *Dependency* (β=.00, p>0.05), *Craving* (β=.07, p>0.05) and *Anticipation* (β=.01, p>0.05) have insignificant relationships towards academic performance. This indicates that increased *Dependency*, *Craving* and *Anticipation* on binge-watching do not lead to any significant changes. This may be due to the fact that most of the student responses in this study were moderate. In future studies, researchers will focus on high responses to binge-watching and examine their impact on academic performance). Meanwhile, *Avoidance* shows a positive and significant relationship with academic performance (β=.35, p<0.001). *Avoidance* contributed as a strong variable towards academic performance as compared to *Dependency, Craving, and Anticipation.* Thus, this study rejects H_1, H_3, and H_4 and accepts H_2.

Table 6: Regression Analysis Results

Variables	Unstandardized Coefficient		Standardized Coefficient	t	Sig	R²	F
	B	SE	Beta (β)				
Constant	.39	.13		3.04	**.00	.17	7.72
Dependency	.00	.05	.00	.50	.96		
Avoidance	.19	.05	.37	4.3	**.00		
Craving	.05	.06	.07	.77	.44		
Anticipation	.00	.05	.01	.15	.86		

**p<0.001

The study measured the extent to which binge-watching addiction among student influenced academic performance. The study found that binge-watching addiction (Dependency, Craving, and Anticipation) does not influence academic performance. This study is consistent with the previous research done by Yassine and Abdelghanie (2024) regarding students' perception of binge-watching and student engagement. The study reported that students do not perceive binge-watching as an affecting factor to their academic performance. Both studies challenge the assumption that binge-watching inherently leads to poor academic outcomes. Instead, they highlight that students are capable of self-regulation and often incorporate binge-watching into their routines without letting it interfere with their educational goals. Students viewed binge-watching as a normal and often necessary part of their routine. It was often framed as a tool for emotional regulation or mental relaxation rather than an addictive behavior with harmful consequences. Students generally maintained their academic responsibilities despite binge-watching habits.

However, the current study identified that binge-watching addiction particularly through the avoidance dimension, negatively influences students' academic performance. This suggests that students may use binge-watching as an avoidance imitate mechanism, either intentionally or unintentionally diverting their concentration away from academic responsibilities. This behaviour is associated with a lack of awareness regarding the problematic characteristics of extreme viewing, as well as an inclination to lessen or even rationalize the existent time spent binge-watching, often masking its influence on

academic tasks. This conclusion is supported by Paulus and Aziz (2023), who discovered that binge-watching behaviour was significantly connected to academic procrastination and influenced by compensatory health beliefs. These are beliefs or acceptances that students evolve to rationalize their binge-watching behaviour, and they "deserve" to binge-watch because they have studied ahead which finally led to procrastination and low academic performance. Meanwhile, Rosli and Mahudin (2024) provide a similar understanding into the psychological foundations of avoidance in the binge-watching context and found that social communication anxiety and loneliness are important predictors of binge-watching behaviour among university students. These results indicate that students connect in binge-watching not just for entertainment, but to manage their emotional anxiety. This justification inhibits students from acknowledging binge-watching as challenging or problematic behaviour and instead mount it as a recognised break or reward, even when it affects the deadlines in preparing the assignment.

The study indicates that increased Dependency, Craving, and Anticipation of binge-watching do not lead to significant changes in academic performance. This may be because most of the student responses in this study were moderate. Siraj and Nimy (2023) said based on their studies on binge-watching towards procrastination in academic assessments that if done in moderation it is not dangerous. Thus, moderate behaviour on binge-watching is harmless, especially for academic performance.

Based on past studies, binge-watching addiction poses significant risks to learning performance by inducing cognitive fatigue (Ilyas and Qureshi, 2020), depressive symptoms and impulsivity (Steins-Loeber et al., 2020), disrupting sleep and reducing academic engagement (Vaterlaus et al., 2019), and emotion (Tefertiller & Maxwell, 2018). While moderate binge-watching consumption can be integrated into a balanced lifestyle. It suggests that, like many other behaviour or activities, binge-watching can be admitted as a healthful practice if students use it in a regulated manner without adversely affecting other sides of life.

Healthful practice includes a period for physical activities, mental inspiration, socialization, rest, and nourishment. Moderate binge-watching can be incorporated with these important components. For some, binge-watching a TV or video series can support anxiety relief or a temporary avoidance of routine tasks. It can also be an approach to relax after a hectic day or to connect with stories and individuals that will provide pleasure, satisfaction, or responsive release. In future studies, the researchers will investigate the high responses to binge-watching behaviour and examine their impact in academic performance.

Ethical considerations
Formal ethical approval from an institutional review board was not applied. However, all participants were informed about the purpose of the study, their right to decline or withdraw at any time, and the confidentiality of their responses. Informed consent was obtained through a clear information sheet presented at the beginning of the online survey and proceed to the questionnaire implied consent to participate. Data were collected anonymously and securely stored to ensure confidentiality.

Implications
Policy
Even though the current study does not significantly impact academic performance, this research can provide empirical evidence for academies and authority agencies to develop regulations and policies that will balance digital entertainment and academic accountabilities. Apart from that, a more balanced approach such as media literacy among students could be encouraged to inform students of the dangers of binge-watching obsession. The study may also influence strategies or regulations that promote early detection and involvement for students displaying signals of binge-watching addiction.

Academic
As the current results of this study showed moderate binge-watching (which has less effect on academic performance), learning institutions may consider incorporating OTT platforms into educational tools such as documentaries, news updates, current issues either local or global, religious TV shows, etc. in

engaging students' cognitive and knowledge regarding reality in daily life. Educators could use this method as a student's assignment where students will analyse the TV shows critically. Thus, moderate binge-watching behaviour can be a powerful tool in education rather than a distraction in the learning process.

Parents and community engagement
Nevertheless, the moderate binge-watching finding may educate parents regarding the purpose of digital usage on students' achievements where positive guidance will help them to manage their children's habits in entertainment healthily. Meanwhile, community engagement, especially the students' clubs, could influence peer support on time management, especially streaming TV shows on OTT platforms.

Industry (OTT content providers)
The content providers may use the findings to create a friendly environment with educational content. As moderate binge-watching is not harmful, OTT content providers may focus on promoting a study-friendly feature such as informing and recommending students or audiences regarding educational TV shows, a friendly reminder to take breaks after prolonged viewing sessions (e.g. a smartwatch will alert the wearer, to move around after sitting for a long time at work or home), and rewards if the students can balance binge-watching and academic behaviour. Moreover, specific TV shows such as "edutainment" content (education and entertainment) can be produced that align with subject learning parameters and personal development.

Conclusion
The current study showed that moderate binge-watching does not have harmful effects on digital users, especially students. Instead of focusing on the viewing guidelines or restrictions, the OTT content providers should be more responsible for media consumption. Meanwhile, the policies should promote and apply self-regulation, media literacy, and time management for healthy viewing duration. A healthful practice includes a period for physical activities, mental inspiration, socialization, rest, and nourishment. Moderate binge-watching can be incorporated with these important components. For some, binge-watching a TV or video series can support anxiety relief or a temporary avoidance of routine tasks. It can also be an approach to relax after a hectic day or to connect with stories and individuals that will provide pleasure, satisfaction, or responsive release. In future studies, the researchers will investigate only the high responses to binge-watching behaviour and examine their impact on academic performance.

Author Contribution
Dzaa Imma Abdul Latiff – Head, operationalization, introduction, data analysis, implication, write up, editing & proofread; Ahmad Syakir Salman Salleh @Abd Latif – Literature review, main variables & write up; Wan Anis Aqillah Wan Megat Zambri – Instrument, designing survey & write up; Suhaila Kamal – Literature review, theory & write up; Muhammad Nabihan Abu Bakar – data collection & write up.

Conflict of Interest
Author declares no conflict of interest

Declaration on the Use of Generative AI
Authors used Grammarly and ChatGPT to check for the language enhancement.

References
Abdul Latiff, D. I., Ayub, M. S. M., Kamal, S., Zambri, W. A. A. M., & Abdul Latif, A. S. S. S. (2022). The role of personal innovativeness and social influence towards over the top (OTT) video streaming during the COVID-19 pandemic. *International Journal of Academic Research in Business and Social Sciences. 12(6),* 2126 – 2141.

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

Ajzen, I. (2002), Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behaviour, *Journal of Applied Social Psychology, 32*(4), 665-683.

Akin, A., & Iskender, M. (2011). Internet addiction and depression, anxiety and stress. *International Online Journal of Educational Sciences*, *3*, 138-148

Ali, A., Xiaoling, G., Sherwani, M., Ali, A. (2017). Factors affecting Halal meat purchase intention evidence, from international Muslim. *British Food Journal*, *119*(3), 527–541. https://10.1108/BFJ-10-2016-0455

Antons, S.; Brand, M.; Potenza, M.N. (2020). Neurobiology of cue-reactivity, craving, and inhibitory control in non-substance addictive behaviors. *Journal of Neurology. Science. 415*, https:// doi.org/10.1016/j.jns.2020.116952

Ates, H. (2019). Elementary school teachers' behavioral intentions for healthy nutrition: Extending Theory of planned behavior, *Health Education*, *119*(2), 133-149. doi: 10.1108/HE-11-2018-0056.

Bokhan, N.A.; Mandel, A.I.; Stoyanova, I.Y.; Mazurova, L.V.; Aslanbekova, N.V.; Ankudinova, I.E. (2013). Psychological defense and strategies of coping in alcohol dependence and co-dependence in women. *Journal of Psychology. Psychother. 3*. 1-4. https://doi:10.4172/2161-0487.1000128.

Bernard, H. R. (2002). *Research methods in anthropology*: Qualitative and quantitative approaches (3rd ed.). Alta Mira Press.

Chastin, S. F., Harvey, J. A., Dall, P. M., McInally, L., Mavroeidi, A., & Skelton, D. A. (2019). Beyond "#endpjparalysis", tackling sedentary behaviour in health care. *AIMS Medical Science*, *6*(1), 67–75. https://doi.org/10.3934/medsci.2019.1.67

Chaudhary, N. (2014). The TV binge: A sickness. Stanford Daily. https://stanforddaily.com/2014/11/06/the-tv-binge-a-sickness [Access online 1 January 2024]

Close, M.A., Lytle, L.A., Chen, D.-G. and Viera, A.J. (2018). Using the theory of planned behavior to explain intention to eat a healthful diet among Southeastern United States office workers. *Nutrition & Food Science*, *48*(2) 365-374. https://doi.org/10.1108/NFS-06-2017-0123

Matos, D. M. G., & Ferreira, P. (2020). The effect of binge-watching on the subscription of video on demand: Results from randomized experiments. *Information Systems Research*, 31(4), 1337–1360. https://doi.org/10.1287/isre.2020.0948

Flayelle, M., Maurage, P., & Billieux, J., (2017). Toward a qualitative understanding of binge-watching behavior: A focus group approach. *Journal of Behavioral Addictions*. *6*(4), 457-471. https://doi.org/10.1556/2006.6.2017.060

Forte, G., Favieri, F., Tedeschi, D., & Casagrande, M. (2021). Binge-watching: Development and validation of the binge-watching addiction questionnaire. *Behavioural Sciences, 11*(2), 27. https://doi.org/10.3390/bs11020027

Ilyas, U., & Qureshi, A. S. (2020). Relationship between binge watching and cognitive functioning among university students in Lahore, Pakistan. *Rawal Medical Journal, 45*(3), 702-702. https://www.researchgate.net/publication/344027121

Ilham and Kamariah. (2012). Examining a theory of planned behavior (TPB) and technology acceptance model (TAM) in internet purchasing using structural equation modelling. *Journal of Arts, Science & Commerce*. *3*(2), 62-77.

Latiff, D. I. A., & Kamal, S. (2021). Information of Covid-19 on Ott Services Influences the Intention to Follow "The Stay at Home" Orders. *International Journal of Academic Research in Business and Social Sciences*, *11*(9), 282–296. http://dx.doi.org/10.6007/IJARBSS/v11-i9/10797

Luigjes, J.; Lorenzetti, V.; de Haan, S.; Youssef, G.J.; Murawski, C.; Sjoerds, Z.; An den Brink, W.; Denys, D.;

Fontenelle, L.F.; Yücel, M. (2019). Defining compulsive behavior. *Neuropsycholgy Review. 29*, 4–13. https://doi.org.10.1007/s11065-019-09404-9

Magdalene C.H. Ang & Ramayah, T. & Hanudin Amin (2015). Efficacy of the theory of planned behavior in the context of hiring Malaysians with disabilities. *Journal of Developing Areas*, *49*(3), 13-25. https://doi.org.10.1353/jda.2015.0160

Mehmood, S., & Taswir, T. (2013). The effects of social networking sites on the academic performance of students in college of applied sciences. *International Journal of Arts and Commerce*, *2*, 111-125.

Ozili, P. K. (2022). The acceptable r-square in empirical modelling for social science research. *Social Research Methodology and Publishing Results*. 184-192. http://dx.doi.org/10.2139/ssrn.4128165

Panda, S., & Pandey, S. C. (2017). Binge watching and college students: Motivations and outcomes. *Young Consumers*, *18*(4), 425-438. https://doi.org/10.1108/YC-07-2017-00707

Paulus, A. M., & Aziz, A. (2023) Binge watching, compensatory health beliefs and academic procrastination among university students. *Journal of Behavioral Sciences, 33*(1), 25–40.

Pittman, M., & Sheehan, K. (2015). Sprinting a media marathon: Uses and gratifications of binge-watching television through Netflix. *First Monday*, *20*(10). https://doi.org/10.5210/fm.v20i10.6138

Riddle, K., Peebles, A., Davis, C., Xu, F., & Schroeder, E. (2017). The addictive potential of television binge watching: Comparing intentional and unintentional binges. 37 *Psychology of Popular Media Culture.* Advance online publication. doi: 10.1037/ppm0000167.

Rosli, N. S. F., & Mahudin, N. D. M. (2024). One More Episode Won't Hurt! How Stress, Social Interaction Anxiety, and Loneliness Relate to Binge-Watching Behaviours among University Students. *Deleted Journal*, *4*(1), 1–20. https://doi.org/10.33093/jclc.2024.4.1.1

Safeena, R., Date, H., Hundewale, N., & Kammani, A. (2013). Combination of TAM and TPB in Internet banking Adoption. *International Journal of Computer Theory and Engineering*, 5, 146-150.

Sumaedi, S., Yarmen, M., Bakti, I. G. M. Y., Rakhmawati, T., Astrini, N., & Widianti, T. (2016). The integrated model of theory planned behavior, value, and image for explaining public transport passengers' intention to reuse", *Management of Environmental Quality*, *27*(2), 124- 135, https://doi: 10.1108/MEQ-03-2015-0027.

Steins-Loeber, S., Reiter, T., Averbeck, H., Harbarth, L., & Brand, M. (2020). Binge-Watching behaviour: The role of impulsivity and depressive symptoms. *European Addiction Research*, *26*(3), 141– 150. https://doi.org/10.1159/000506307

Siraj, N. & Nimy, P.G., (2023). Binge Watching, Procrastination and Life Satisfaction among Young Adults. *International Journal of Science and Research (IJSR)*, *12*(6), 1902– 1909. https://doi.org/10.21275/sr23617201905

Starosta, J. and Izydorczyk, B. (2020). Understanding the phenomenon of binge-watching – a systematic review. *International Journal of Environmental Research and Public Health*. 17. 4469. https://doi.org/10.3390/ijerph17124469

Tefertiller, A. C., & Maxwell, L. C. (2018). Depression, emotional states, and the experience of binge-watching narrative television. *Atlantic Journal of Communication*, *26*(5), 278-290. https://doi.org/10.1080/15456870.2018.1517765

Vaterlaus, J. M., Spruance, L. A., Frantz, K., & Kruger, J. S. (2019). College student television binge watching: Conceptualisation, gratifications, and perceived consequences. *The Social Science Journal, 56*(4), 470-479. https://doi.org/10.1016/j.soscij.2018.10.004

Yassine, B. A. & Abdelghanie, E. (2024). *Binge-watching and academic achievement among university students: A case study. Journal of Positive Psychology and Wellbeing*. *8*(2). 101-118.

https://journalppw.com/index.php/jppw/article/view/18073

Zhang, X., Liu, S., Wang, L., Zhang, Y., & Wang, J. (2019). Mobile health service adoption in China: Integration of theory of planned behavior, protection motivation theory and personal health differences, *Online Information Review*, *44*(1), 1-23, doi:10.1108/OIR-11- 2016- 0339.