



**University of
Sunderland**

Ilyas, Uzma, Maqsood, Rimsha, Ahsan, Humna and Afzal, Sidra
(2023) Binge-Watching as Behavioral Addiction: A Systematic
Review. Binge-Watching as Behavioral Addiction: A Systematic
Review, 2 (2). pp. 211-65. ISSN 2959-1600

Downloaded from: <http://sure.sunderland.ac.uk/id/eprint/17639/>

Usage guidelines

Please refer to the usage guidelines at
<http://sure.sunderland.ac.uk/policies.html> or alternatively contact
sure@sunderland.ac.uk.

Applied Psychology Review (APR)

Volume 2 Issue 2, Fall 2023

ISSN(P): 2959-1597 ISSN(E): 2959-1600

Homepage: <https://journals.umt.edu.pk/index.php/apr>



Article QR



Title: **Binge-Watching as Behavioral Addiction: A Systematic Review**

Author (s): Uzma Ilyas¹, Rimsha Maqsood¹, Humna Ahsan¹, Adina Rauf¹, Sidra Afzal²


Affiliation (s): ¹University of Central Punjab, Lahore, Pakistan.
²The University of Sunderland, Sunderland, England

DOI: <https://doi.org/10.32350/apr.22.03>

History: Received: May 11, 2023, Revised: October 30, 2023, Accepted: November 23, 2023,
Published: December 29, 2023

Citation: Ilyas, U., Maqsood, R., Ahsan, H., Rauf, A., & Afzal, S. (2023). Binge-watching as behavioral addiction: A systematic review. *Applied Psychology Review*, 2 (2), 39–65. <https://doi.org/10.32350/apr.22.03>

Copyright: © The Authors

Licensing:  This article is open access and is distributed under the terms of [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

Conflict of Interest: Author(s) declared no conflict of interest



A publication of
Department of Knowledge & Research Support Services
University of Management and Technology, Lahore, Pakistan

Binge-Watching as Behavioral Addiction: A Systematic Review

Uzma Ilyas¹, Rimsha Maqsood¹, Humna Ahsan¹, Adina Rauf¹, and Sidra Afzal^{2*}

¹Department of Psychology, University of Central Punjab, Lahore, Pakistan

²School of Psychology, University of Sunderland, Sunderland, England

Abstract

In the recent past, binge-watching has emerged as one of the most prevalent pursuits among adults. Being a relatively new phenomenon, there is a pressing need to examine the literature on the associations of binge watching with various psychological correlates such as cognitive processes, emotional regulation, moods and sleep patterns. Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) model was employed for this systematic review. Relevant articles were collected using various databases including Google Scholar, Research Gate and PubMed. This resulted in a collection of 209 articles which were further screened based on the predefined inclusion and exclusion criteria. Out of these articles, 18 met the criteria and were included in the study. The findings revealed noteworthy associations between binge-watching behavior; particularly problematic patterns, and disruptions in mood and emotional dysregulation. The systematic review highlighted that the phenomenon of binge-watching as an addictive and problematic behavior has negative outcomes for individuals such as compromised executive functioning as well as cognitive deficits.

Keywords: addictive behavior, adults, binge-watching, cognitive impairment, emotional regulation, executive functioning, sleep regulation

Introduction

In the past, watching television at home was a significant way of acquiring entertainment and recreation through media for the viewers (Starosta, Izydorczyk, & Wontorczyk, [2021](#)). Since the last few decades, the development of video-on-demand and limitless access to internet television networks like Amazon Prime, Netflix and other online streaming platforms (Alfonsi et al., [2023](#)) has increased the spread of ‘binge-watching’. The audience has transitioned from watching television to streaming on online platforms for watching and entertaining themselves (Matrix, [2014](#)). One

*Corresponding Author: sidra.afzal@sunderland.ac.uk

important method of consumption of streaming media is binge-watching (Granow et al., [2018](#)).

Binge-watching is a behavior that is increasing day by day and is defined as watching several episodes of a series in a single sitting (Alfonsi et al., [2023](#)). Few researchers explain binge-watching as watching one to three episodes in a single sitting while others describe it as watching three to four, more than half an hour lengthy show (Merrill & Rubenking, [2019](#)). Development in multimedia made everyone more comfortable to binge-watch on several devices (Starosta et al., [2020](#)) and has increased its accessibility which means that people can watch their desired shows anywhere including workplace, at home, and while traveling (Starosta, Izydorczyk, Sitnik-Warchulska et al., [2021](#)).

The reason for the popularity of binge-watching shows on these streaming websites and platforms lies in their ability to provide the viewers with freedom from their restricted schedules of entertainment shows (Panda & Pandey, [2017](#)), and enable individuals to have liberty over the timings and content of their consumption according to their preferred timings (Chang & Peng, [2022](#)). Young adults have a higher tendency to binge-watch, especially at night to avoid disturbance (Chassiakos et al., [2016](#)). In addition, women show a greater tendency than men to binge-watch. The motivation to binge-watch seems to be associated with gratification theory. It emphasizes that people binge-watch to meet their needs of gratification through this form of entertainment as well as relaxation (Starosta et al., [2020](#)).

Moreover, the psychological mechanisms which come into play explain binge-watching behaviors in terms of a complex connection between emotions and brain chemistry. The neurotransmitter “dopamine” which is responsible for pleasure responses in the brain is triggered when individuals engage in binge-watching. The constant release of this ‘feel good’ hormone, provides a drug-like high making it hard for them to stop. Binge-watching also takes advantage of ‘the need for closure’ of the human brain by increasing cognitive engagement. They keep binge-watching due to their need to know the end. Many times, binge-watching turns into a social activity. Conversing on internet forums or with friends and family regarding shows and story plot twists provides an additional element of joy and this shared experience and sense of connection (Gore, [2023](#)).

Binge-watchers with unhealthy patterns have negative reinforcers like escapism (Sung et al., [2018](#)), and report more problems than healthy binge-watchers who have pleasure-seeking motives like entertainment (Billaux et al., [2022](#)). Individuals try to release emotional burden and get relaxed which is the main reason that young people engage in binge-watching. The same phenomenon occurs in other multimedia addictions like online gaming e.g., PUBG and free fire (Starosta et al., [2019](#)).

Furthermore, those who think that a certain substance or behavior can relieve their negative emotions, help them escape reality, and provide a coping mechanism for distress (Dixit et al., [2020](#)), are at a greater risk of addiction. It has been observed that people are more likely to experience addiction when they enter adulthood. Probably because of the encountered distress that comes along with responsibilities of the adulthood (Arnett, [2000](#)) and their decision in various domains of life that require stepping out of comfort zone (Starosta, Izydorczyk, Sitnik-Warchulska et al., [2021](#)). Prolonged and excessive binge-watching certainly brings about adverse consequences for individuals. The connection between binge-watching behaviors and mental health is controversial. An individual's desire to leave their current state of dissatisfaction and release this pressure, encourages binge-watching as a result of which they are likely to experience mental health outcomes. However, evidence also reports that binge-watchers experience feelings of relaxation and happiness which suggests a negative correlation between the frequency of binge-watching and the severity of mental health problems (Sun & Chang, [2021](#)). Problematic patterns of binge-watching are similar to drug and other behavior addictions affecting individuals' daily life functioning as they become addicted to it, like poor sleeping schedules or unhealthy eating habits, and other psychiatric conditions, depression, anxiety etc. (Nee & Barker, [2020](#); Sun & Chang, [2021](#)). Binge-watching might be fun for youth, but it is highly addictive causing many physical, psychological and social effects (Gangadharbatla et al., [2019](#)).

Binge-watching leads to disturbed physical health, for instance, poor sleep habits, body pains, obesity, and poor eyesight (Wheeler, [2015](#)). Sleep disturbance is one of the potential outcomes of binge-watching. Screen exposure due to binge-watching negatively affects sleep quality, increases lethargy, and leads to insomnia due to spiked cognitive arousal (Exelmans & Van den Bulck, [2017](#)). As a result, poor sleep quality is linked to emotion

dysregulation and loneliness (Tavernier & Willoughby, [2015](#)). Sleep disturbance has a negative impact on cognition, like cognitive functions that significantly impact emotional regulation (Touitou et al., [2016](#)). Research shows that difficulties in regulating emotions were important predictors of problematic binge-watching (Alfonsi et al., [2023](#)). Another factor that impairs sleep is pre-sleep arousal because binge-watching increases an individual's arousal which delays the onset of sleep. Thus, watching thrilling shows before sleep increases arousal (Ong et al., [2018](#)). Additionally, sudden endings during crucial scenes known as cliffhangers increase cognitive arousal which in turn dysregulates the sleep cycle (Exelmans & Van den Bulck, [2017](#)).

Other physiological challenges associated with sedentary lifestyles such as excessive binge-watching include disturbance of metabolic functions due to high blood pressure and increased lipid and glucose levels (Salmon et al., [2011](#)). Longitudinal research shows that prolonged inactive schedules during early adulthood negatively affect cognitive functioning including a decline in executive control and processing speed in midlife (Hoang et al., [2016](#)). Executive functioning includes capabilities that work together to help people in meaningful and organized processing of actions, experiences, emotions and thoughts (Rocke et al., [2008](#)). These functions are vital to adults' daily lives and involve complicated cognitive processes that are important for decision-making, working memory, emotional control, continuous attention, planning, and organization (Ilyas & Qureshi, [2020](#)).

Based on the above evidence, it is clear that binge-watching has potential psychological and physical outcomes. People even prefer binge-watching over social relationships to escape reality and avoid distress. This signifies the importance of exploring the recent research trends of binge-watching, its correlates, and consequences which could help devising strategies to overcome potential consequences of binge-watching.

Objective of the Research

This paper aims to present a systematic review of all the accessible and available evidence regarding the adverse outcomes of the phenomena of behavioral addiction; binge-watching and its covariates that are related mainly to numerous physical and mental health consequences that might lead to or develop clinical complications. Hence, the systematic review has a specific objective (a) to review the existing literature on binge-watching

behaviors, (b) synthesize relevant and up-to-date information on the phenomenon, and (c) to examine evidence regarding the effects and outcomes of binge-watching behaviors.

Research Question

What are the psychological correlates of non-chemical addiction in specificity with binge-watching in adulthood?

Method

The Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines were followed to carry out the systematic review. The research team consisted of four members who explored three databases (Google Scholar, PubMed, & ScienceDirect) from December 2020 to August 2023 and carried out the systematic review.

Search Strategy

The systematic review performed according to the PRISMA guidelines explored studies highlighting the impacts of binge-watching among young adults. The main techniques employed for searching articles in this study included advanced search (through filters of language, article type, publishing date, etc.) and manual search on the selected databases and search engines. The authors used “Boolean operation” to expedite the process of data searching. Boolean operation involves combining different combinations of the keywords with AND or/and OR. The research was centered on a set of predefined keywords including binge-watching, sleep quality, sleep regulation, addictive behaviors, cognitive impairment, emotional regulation, executive functioning, etc. The identification of articles was enlisted through Google Scholar, PubMed, and ScienceDirect. One of the prominent algorithms was binge-watching and its correlation with sleep. After thoroughly exploring three data bases a total number of 209 articles were collected.

Screening and Selection of the Articles

The articles identified through the search were examined for inclusion and exclusion in the study. In the first step, duplicates ($n=18$) were excluded from the total articles, following which 190 articles remained. Out of these 190 articles, 5 articles were removed for unavailability of their full-text versions. The remaining 185 articles were assessed and analyzed on the basis of the criteria mentioned below.

Inclusion Criteria

- Articles published in the English language.
- Original article
- Research conducted from 2016-2023
- Addressing binge-watching and its neuropsychological impacts such as sleep, emotional regulation, cognitive impairment etc.
- Sampled participants with age >18

Exclusion Criteria

- Dissertations and theses
- Language other than English
- Published in journals not recognized by the Higher Education Commission (HEC), Pakistan.
- Systematic reviews and meta-analysis.
- Unavailable full-text.

Selection Process

The articles related to binge-watching were collected by researchers and compiled into the data set by using the Boolean operator. Once the data was collected, the authors reviewed the articles and extracted the articles based on inclusion and exclusion criteria. In the next step, authors scrutinized and screened the fully available articles based on the inclusion and exclusion criteria.

Following a rigorous practice of evaluating articles based on the criteria, a total of $n = 18$ articles was retained to be included in the systematic review. Most of the articles were excluded for reasons such as articles were systematic reviews, meta-analysis, letter to editors, dissertations, and student theses. Additionally, some articles were not published in the W, X, and Y categories of journals as defined by HJRS. Moreover, for many articles, exclusion took place because the content of the articles did not directly address binge-watching and the associations of this phenomenon with sleep and emotional dysregulations. The articles that directly focused on the binge-watching phenomenon and its correlates were included. The

final selected articles were published in the English language, from 2016 to February 2023, in HEC-recognized journals, and addressed adults as study participants. The process of article search, screening, and final selection was carried out from December 2022 to August 2023.

After the final selection of the articles, these articles were thoroughly reviewed to obtain relevant information from each article and synthesize the results qualitatively. The screening and selection process is elaborated in the flow diagram given below.

Figure 1

PRISMA Flow Diagram for Paper Selection Process Used in the Current Review

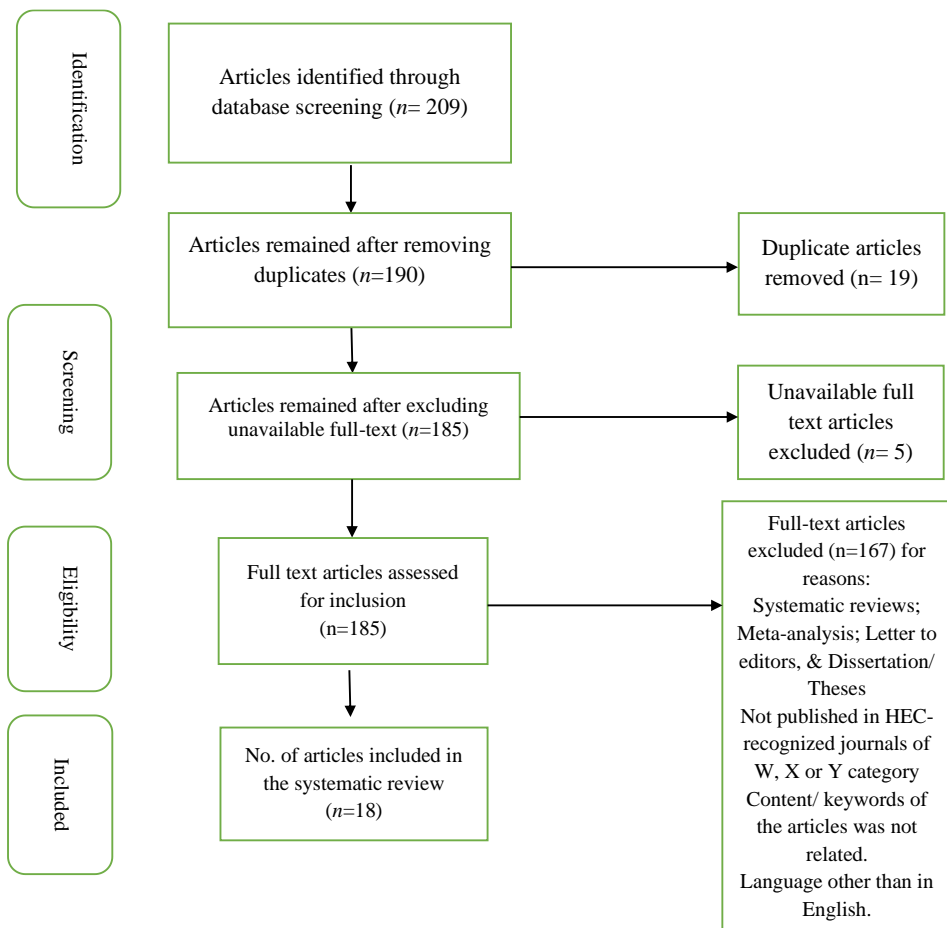


Table 1
Characteristics of the studies included in Systematic Review

Author and Year of Publication	Title of the article	Sample	Objective	Design	Results/ Findings
Alfonsi et al. (2023)	‘This is the last episode’: The association between problematic binge-watching and loneliness, emotion regulation, and sleep-related factors in poor sleepers	462 participants (261 women and 201 men of 18 to ≥ 40)	The study aimed to investigate pathological and non-pathological aspects of binge-watching among both healthy and poor sleepers.	Cross-sectional	The results of this study revealed that in poor sleepers, problematic binge-watching could be determined by loneliness, emotional dysregulation and day-time sleep.
Baselgia et al. (2023)	Pre-sleep arousal induced by suspenseful series and cliffhangers have only minor effects on sleep: A sleep laboratory study	50 adults (39 women and 11 men, aged 18-25 years)	The study aimed to investigate if pre-sleep arousal which is induced by the cliffhangers and suspenseful series affect sleep.	Cross-sectional	The results of this study did not reveal any major impairments in sleep due to pre-sleep arousal induced by suspenseful series and cliffhangers.
Starosta, Izydorczyk, Sitnik-Warchulska et al. (2021)	Impulsivity and difficulties in emotional regulation as predictors of binge-watching behaviors	645 (532 women, 101 men, 3 transgender, and 7 unknown, mean age 18-30 years)	The research aimed to explore links between impulsivity, emotional regulation difficulties, and	Cross-sectional	Findings from this study suggested that a lack of impulse control, escape motivation, and inability to regulate emotions are determinants of

Author and Year of Publication	Title of the article	Sample	Objective	Design	Results/ Findings
			motivation TV-watching.		problematic binge-watching.
Pauline Billax and others- 2022	Negative affect and problematic binge watching; The mediating role of unconstructive ruminative thinking	306 participants (250 women and 56 men with age of 18 years and above)	The main purpose of this study was to investigate the mediating role of unconstructive ruminative thinking.	Cross-sectional	Results indicated that ruminative thinking played the role of a mediator between negative affect and binge-watching. Moreover, it suggested that problematic binge-watching may strengthen maladaptive regulation of emotions.
Starosta et al. (2020)	Personality traits and motivation as factors associated with symptoms of problematic binge-watching	1004 participants (854 women and 150 men, aged 19-26 years)	The purpose of the study was to identify psychological factors associated with problematic binge-watching and to identify devices and platforms preferred by young people who binge-watch.	Cross-sectional	Findings suggested that problematic binge-watching is strongly associated with low agreeableness, low emotional stability etc.
Flayelle et al. (2019)	Non-problematic and problematic binge-watchers do not differ on prepotent response inhibition: A	58 participants (44 women and 12 men, aged 18 years and above)	The study aimed to explore whether non-problematic and problematic binge-watchers are different in self-	Pilot experimental study	The outcomes of the study showed no neurological impairment in problematic and non-problematic binge-watching.

Author and Year of Publication	Title of the article	Sample	Objective	Design	Results/ Findings
	preregistered pilot experimental study		report as well as in experimental measures of impulsive behaviors.		
Chang and Peng (2022)	Exploring experiences of binge-watching and perceived addictiveness among binge-watchers: A qualitative study	25 participants (17 women and 8 men, aged 20-29 years)	This qualitative study aimed to explore experiences along with perceptions of binge-watching behavior. In order to determine the characteristics of binge-watching behavior, the criteria of behavioral addiction were used.	Longitudinal	The participants reported and agreed to the uncontrollability for the binge-watching behaviors and the negative effects about other binge-watching audiences and not themselves.
Asgher & Gohar (2022)	Binge watching on internet television networks & its effects on youth	500 participants (250 men and 250 women)	The study proposed to look at the effects of binge-watching on internet television networks.	Cross-sectional	The results revealed that binge-watching is a highly addictive behavior among youth that has social, physical, and psychological consequences.
Ilyas and Qureshi (2020)	Relationship between binge watching and cognitive	376 participants (106 men and 270 women,	The purpose was to explore the trends of executive functioning and the	Cross-sectional	The results indicated that binge-watching has a reverse association with

Author and Year of Publication	Title of the article	Sample	Objective	Design	Results/ Findings
	functioning among university students in Lahore, Pakistan	aged 20-24 years)	relationship of EF with the phenomenon of binge-watching among students of university.		executive functioning among university students.
Exelmans and Van den Bulck (2017)	Binge viewing, sleep, and the role of pre-sleep arousal	423 participants (254 women and 169 men between 18-25 years of age)	To probe the prevalence of binge-viewing, its connection with sleep and inspect arousal as an underlying mechanism of this relationship.	Cross-sectional	The findings show that a high frequency of binge-watching is correlated with poor quality of sleep and symptoms of fatigue and insomnia in individuals with poor sleep.
Ort et al. (2020)	Is binge-watching addictive? Effects of motives for TV series use on the relationship between excessive media consumption and problematic viewing habits.	415 participants (228 women and 187 men, aged 19 years and above)	This study explored the circumstances under which binge-watching phenomenon can be a problematic behavior.	Cross-sectional	The results revealed that the key determinants of problematic binge-watching included frequency of use and motives to engage in excessive binge-watching behavior.
Starosta et al. (2019)	Characteristics of people's binge-watching behavior in the "entering	1004 participants (854 women and 150 men,	The purpose of this article was to determine the frequency as well as	Cross-sectional	The study found an association between frequent binge-watching behaviors and motivation

Author and Year of Publication	Title of the article	Sample	Objective	Design	Results/ Findings
	into early adulthood” period of life	aged 19-26 years)	the motivation to perform binge-watching behavior in young adults.		to escape and cope loneliness.
Raza et al. (2021)	Investigating binge-watching adverse mental health outcomes during COVID-19 pandemic: Moderating role of screen time for web series using online streaming	1089 adult respondent (651 men and 43 women, aged 18 and above)	The study sought to explore the relationship between binge-watching and its psychological consequences during pandemic.	Cross-sectional	Findings suggested that increased binge-watching may lead to mental health issues such as stress, anxiety, loneliness etc.
Flayelle et al. (2022)	Identifying the psychological processes delineating non-harmful from problematic binge-watching: A machine learning analytical approach	4275 (3398 women and 859 men with average age 24.8 years)	To investigate the psychological determinants of healthy/non-problematic and problematic binge-watching behavior patterns.	Cross-sectional	Healthy binge-watching was associated with positive reinforcement while unhealthy/problematic binge-watching was linked to negative reinforcement.
Lades et al. (2022)	Self-control, goal interference, and the binge-watching experience: An event	247 (175 women and 72 men with age above 18 years)	This study examined whether a lack of self-control explains binge-watching experiences when measured using the	Cross sectional	The findings of the study revealed lower levels of tiredness, feelings of guilt, and sadness during binge-watching in individuals

Author and Year of Publication	Title of the article	Sample	Objective	Design	Results/ Findings
	reconstruction study		method of event reconstruction.		with high levels of the trait of self-control.
Sung et al. (2018)	Why do we indulge? Exploring motivations for binge watching.	292 (223 women and 69 men under the age of 19 or in their 20s)	The study intended to explore the definition and motivations behind binge-watching.	Cross-sectional	The results indicated that motivation for entertainment was the main factor in binge-watch among individuals who binge-watch less frequently while entertainment motivation and time passing both predicted binge-watching among individuals who binge-watch frequently.
Panda and Pandey (2017)	Binge watching and college students: motivations and outcomes	229 participants (101 men and 128 women, aged 21-30 years)	The study explored various motivations and the repercussions of binge-watching.	Cross-sectional	The results revealed that social interaction, escapism, and easy access to the content of TV and advertisements affect the motivation to binge-watch.
Kilian et al. (2020)	Neural correlates of response inhibition and performance monitoring in binge watching.	68 participants (40 women and 28 men, aged between 20-30 years)	The study examined inhibition of response and monitoring of performance using EEG in the flanker task.	Cross-sectional	The results revealed that factors such as worry and anxiety may have a role in developing binge- .

Main Characteristics of the Studies Included

All the studies included were published online in the period of 2016-2023. There were few articles selected for inclusion in the systematic review which used a cross-sectional study design and others studies included were longitudinal and pilot studies. The articles in this review included participants with an age range from 18 years and above. All the studies recruited a large number of participants in their studies (1089, 1004, 1000, 500 etc.) except a few where the number of participants was small such as 25 participants in one and 60 participants in another study. Among 18 articles, two of the recent studies were conducted in Pakistan whereas other studies encompassed adults to comprehend manifestations of the same phenomenon in different regions across Asia and Europe such as Poland, Belgium, etc. The method for data collection was survey forms and questionnaires either online or in-person form filling. An overview of the articles included in the systematic review is given in Table 1.

Process / Behavioral Addiction: Binge-Watching

Maladaptive Emotional regulation

Utilization of binge-watching as a maladaptive emotional regulation technique is the most prevalent theme reported by multiple studies in this review (Alfonsi et al., [2023](#); Lades et al. [2022](#); Starosta et al., [2019](#); Starosta et al., [2020](#); Sung et al., [2018](#)). The findings from various studies suggest that binge-watching can be used as a maladaptive coping mechanism to deal with emotions as it is often consumed to avoid and escape negative emotions and the struggles of their daily lives. Different studies have differentiated the problematic form of binge-watching from the non-problematic. Problematic binge-watching, being a source of distraction and alleviating negative emotions (Alfonsi et al., [2023](#)) is different from healthy/ non-problematic binge-watching which can be a source of entertainment only (Sung et al., [2018](#)). Binge-watching in people with escape motivation and maladaptive coping mechanisms becomes a source of pleasure (Starosta et al., [2019](#)). The dopamine rush that they have at the time when they are engaged in binge-watching makes them engage in this behavior more and more. Additionally, it distracts them from their negative emotions instead of addressing them effectively.

Investigation of the relationship between binge-watching and different traits of personality have revealed associations of binge-watching with low

stability of emotions and neuroticism which can be explained as the tendency to have negative affect and impulsivity (Starosta et al., [2020](#)). When the outside circumstances are too painful for people to process, they employ maladaptive mechanisms instead of adaptive mechanisms to regulate their emotions. Moreover, feelings of guilt and sadness in individuals were associated with high levels of trait of self-control during binge-watching behaviors. This indicates that binge-watching is an avoidant style of coping with stressors and negative emotions rather than an adaptive task-related coping as the individual in the hopes of escaping from reality and their real problems, engages excessively in the fictional world in the form of binge-watching fictional shows on television and Over-the-top (OTT) platforms.

Mood Dysregulation

Some of the studies included in the review reported that binge-watchers experienced mood disruptions and symptoms of withdrawal when they were restricted from continuing binge-watching (Alfonsi et al., [2023](#); Chang & Peng, [2022](#); Raza et al., [2021](#)). In circumstances where they were not able to binge-watch, they experience mood disturbances and instances of distressful and depressive symptoms. Binge-watching was strongly associated with symptoms of anxiety, depression and loneliness (Sun & Chang, [2021](#)). These findings suggest that an increased use of digital media and technology in individuals may have potential negative effects on individuals such as stress, mood swapping and feelings of restlessness. In the self-reported studies, the binge-watchers have reported higher levels of mood disturbances after starting binge-watching on Netflix. Moreover, streaming series on Netflix excessively for more than 4 hours a day or most of the night has also been associated with feelings of isolation among young people, leading them to avoid social relationships and fall into depression.

Sleep Dysregulation

The results of the studies on the relationship between binge-watching and sleep were found to be inconsistent. The results of the study according to Baselgia et al. ([2023](#)) revealed no major impairments in sleep due to pre-sleep arousal induced by binge-watching. However, pre-sleep cognitive arousal is associated with the etiology of disturbed sleep and an increased risk of insomnia. This can be due to different forms of cognitive arousal such as rumination and worry just before sleeping or bedtime, resulting in

sleep disturbances (Billaux et al., [2022](#)). Intense and extensive exposure to television and streaming platforms before sleep has been correlated with cognitive arousal. Research revealed that pre-sleep arousal caused by the excessive use of media and binge-watching right before sleep has been associated with delayed onset of sleep. Additionally, various forms of television viewing habits and variety of the content available on television have been associated with different negative effects on the sleep of binge-watchers. The complexity of the content and narrative might also be an important determinant of the negative outcomes of binge-watching on sleep. The complex narratives of the series keep the audience's mind engaged in thinking and reflecting upon, taking longer time to break out of the fiction even after finishing the show, which leads to delayed onset of sleep. Exposure to this kind of content at bedtime or before sleep results in disruption of the circadian cycle of sleep. Sometimes, the action and thrill of the show get the individuals excited so much that they like they are experiencing trauma themselves and it increases their heart rates, levels of adrenaline and blood pressure at bedtime, which is not favorable for sleep (Alfonsi et al., [2023](#); Exelmans & Van den Bulck, [2017](#)). Moreover, poor emotional regulation and feelings of loneliness in poor sleepers can also increase their risk of binge-watching, causing them to struggle with sleep (Alfonsi et al., [2023](#)).

Cognitive Impairments and Deficits

Cognitive impairment has been reportedly associated with binge-watching. Only a few studies in this review have suggested that a high frequency of television binge-watching has been associated with a sedentary lifestyle among adults leading to adverse effects on their health (Asgher and Goher, [2022](#)). The study on the effects of binge-watching on cognition and executive functioning indicated that excessive binge-watching hinders cognitive abilities leading to poor executive control and a low processing speed (Ilyas & Qureshi, [2020](#)). Moreover, frequent binge-watching has been associated with cognitive impairments such as absent-mindedness, memory deficit etc. Among many consequences and impacts of cognitive disruption due to binge-watching, disturbed sleep is very common. The persistent sleep disturbance in association with cognitive impairment often causes a lack of attention, poor working memory, and a loss of emotional control (Panda & Pandey, [2017](#)).

Binge Watching as Behavioral Addiction

Findings from a few included studies suggested that binge-watching has become a very popular form of behavioral addictions over the past few years. The instant gratification that people receive from engaging in binge-watching behavior has been associated with increased addictiveness. Using any kind of substance or behavior to escape negative emotions has been one significant pathological phenomenon in substance addictions and other addictive behaviors (Ort et al., [2020](#); Asgher & Gohar, [2022](#)). People engaged in excessive binge-watching are so addicted to it that they lose control of the time and start neglecting their household chores, school or job leading to poor academic and occupational consequences.

Motives for Engagement in Binge-Watching Behavior

The analysis of the findings has also identified different motives to engage in problematic binge-watching. An individual's need to acquire new information and fulfil their cognitive need can be a motive that lies behind binge-watching behavior. It has been indicated that the decision to be involved in problematic binge-watching behavior has been associated with an impulsive neural system and not with the inhibitor control of the prefrontal cortex. This indicates that while engaging in binge watching the person does not really consider and think about the repercussions of this behavior and rather is involved in this behavior due to automatic impulsiveness which can be due to a deficiency of inhibitory control or craving sensation felt by the individual. Moreover, the nature of narratives and content also impacts the level of engagement in binge-watching, the more complex and mesmerizing narratives tend to give individuals a higher sense of gratification, leading to high consumption of binge-watching (Starosta et al., [2020](#); Sung et al., [2018](#)).

Discussion

The purpose of this systematic review was to investigate the effects and consequences of binge-watching such as sleep disturbance, cognitive impairment, memory, emotional dysregulation, addictive behavior, and executive functioning in adulthood. The research question was addressed based on the review of 18 full-text articles. The major findings were: (a) Binge watching is an addictive behavior, which can have a similar effect as drugs and any other behavioral addiction; (b) binge-watching is used as a means of escape from negative feelings, emotions, and life stressors which

significantly disturb individuals' daily functioning; (c) binge-watchers experience mood disruptions and symptoms of withdrawal when they were stopped from binge watching; (d) Problematic binge-watching behavior has been associated with an impulsive neural system; (e) excessive binge watching hinders the cognitive abilities leading to poor executive control and processing speed, and (f) screen exposure due to binge-watching often cause sleep disruptions, fatigue, and insomnia due to increased cognitive arousal.

Binge-watching leads to emotional dysregulation, sleep problems, and loneliness (Gabbiadini et al., [2021](#)). Binge-watching and loneliness reciprocally strengthen each other; a lonelier individual has a higher chance of using binge-watching as a coping mechanism (Perks, [2019](#)). Additionally, a problematic binge is associated with low emotional stability (Alfonsi et al., [2023](#)). A study showed that people who have less control over themselves experience more negative emotions while binge-watching (Pittman & Steiner, [2021](#)). It has been reported that experiences of loneliness and dysregulated emotions are significant contributors to lead individuals to engage in binge-watching behaviors. This can result in increased daytime sleepiness, which further allows individuals to avoid negative and stressful emotions by escaping reality through their binge-watching. Nevertheless, escape and dysregulated emotions (stress, loneliness, and negative feelings) are common among poor sleepers as well as binge-watchers. It is because they cannot resist their urge to binge-watch which not only interferes with their health but also their life goals; this makes them sad and guilty, while this is not the case with people who have good self-control (Lades et al., [2022](#)).

Literature related to sleep difficulties Associations of sleep problems with binge-watching has demonstrated inconsistent findings; however, People with poor quality sleep are at a greater risk of binge-watching as they are unable to regulate their emotions properly and feel lonelier. Unfortunately, binge-watching can deteriorate the quality of sleep, and increase daytime sleep which further negatively affects emotional health and social life (Alfonsi et al., [2023](#)). Bernhold and Metzger ([2020](#)) have provided evidence suggesting a significant association of binge-watching with mood disturbances, sleep dysregulations, fatigue, and self-regulation. Likewise, another research (Alimoradi et al., [2022](#)) also highlighted the potential impact of binge-watching on mental health and sleep. Literature

also indicates that pre-sleep arousal due to shows that bring thrill and excitement increases cognitive arousal by activating mental processes like thoughts and worry leading to a delay in the sleep onset latency. Differing from this, a recent study indicated that such thrilling shows may help an individual to fall asleep faster irrespective of cognitive arousal, while those who watch boring shows may have a prolonged sleep onset as they are likely to experience negative emotions such as anger, frustration or sadness (Baselgia et al., [2023](#)).

Research has also shown binge-watching, as a source of coping, helps individuals escape from reality as it diverts their focus from stressors by engaging in binge-watching. Evidence has suggested that an unconstructive ruminative style of thinking fosters habitual escaping through binge-watching to seek emotional relief. Problematic binge-watchers are reinforced by negative reinforcers such as escapism, and they experience more negative impacts on their mental, physical, and cognitive health. They tend to get involved in binge-watching behaviors to regulate and get relief from their emotions (Rubenking & Bracken, [2018](#)). Moreover, the literature also supports that binge-watching is a consequence of stress, loneliness, worry, anxiety, and boredom that are related to negative orientation which further affects the physical, mental, and academic decline (Vaterlaus et al., [2019](#); Xia et al., 2020).

It has been reported that many people binge-watch after getting done with a long and tiring task such as projects. They would spend a whole day watching a show while ignoring their social life and become isolated for that time. The motivation to escape from the negative effects and exhaustion becomes an important predictive and determining factor to binge-watch for these people (Starosta, Izydorczyk, & Wontorczyk, [2021](#)). The negative reinforcement which is escapism has been proven to be a predictor of other media usage such as internet gaming and scrolling on social media websites. Furthermore, some research findings suggest that binge-watchers get so immersed in the show that whatever happens in the show affects them emotionally and psychologically. Whereas, another reason to watch episodes of a series nonstop is to keep the flow and get a better grasp of the storyline making the show more interesting and enjoyable (Sung et al., [2018](#)). Moreover, research states that smartphones which are the handiest gadgets are one of the major sources and motivation factors behind binge-watching for the sake of entertainment, both among men and women

(Granow et al., [2018](#)), while other reasons include a desire to spend free time (Starosta et al., [2020](#)).

The results of the studies in this review are somewhat contradictory to the literature on binge-watching and neurological factors as it fails to depict the association of binge-watching with many devastating or negative effects. One study indicated no neurological impairment in problematic and non-problematic binge-watching (Flayelle et al., [2019](#)). However, other researchers conclude that excessive exposure to television cause a deficiency in gray matter as the cerebrum is surrounded by grey matter which is positioned within the frontal lobe (where executive functioning takes place), this supports the results of the research article which concludes that binge watching and executive functioning is correlated negatively (Dougherty et al., [2022](#)).

The current review is presented with a few limitations. First of all, it provides a rather one-sided picture of outcomes and correlates associated with binge-watching by mere focusing adverse outcomes and disregarding the positives of media use and non-problematic patterns of binge-watching on viewers. Another limitation is that the majority of the studies included in the current review are from the United States or Europe, therefore the generalizability of the findings of this research is limited. Future research should explore binge-watching as a whole to impart a thorough understanding of the phenomenon, including the distinction between healthy and problematic binge-watching to prevent pathological impacts of this prevalent phenomenon. Moreover, considering the evidence provided in this review for the negative outcomes of binge-watching behaviors, future research should also emphasize the restrictive policies and guidelines for the viewers that could be implemented to diminish the harms caused by the problematic patterns of binge-watching.

Conclusion

To conclude, we can say that the upsurge in social networking sites and OTT platforms in recent times has led to binge-watching as a prevalent and engaging activity among young people. Being a contemporary phenomenon, there is a pressing need to thoroughly examine the literature on binge-watching to identify its correlates. The results of systematic review on binge-watching indicate that the motives for engaging in problematic binge-watching include an impulsive neural system, lack of

inhibitory control in individuals, maladaptive, and escape coping mechanisms. The results of the review also imply that excessive binge-watching can lead to adverse psychological outcomes such as mood disorders, emotional dysregulation, and poor executive functioning leading to attention, memory loss etc. among the adults. Among major impacts of binge-watching, sleep dysregulation is one the prominent issues experienced. The review provides key insights regarding the phenomenon of binge-watching and highlights various factors which can be focused to ensure the effective management of binge-watching.

References

- Alfonsi, V., Varallo, G., Scarpelli, S., Gorgoni, M., Filosa, M., De Gennaro, L., Musetti, A., & Franceschini, C. (2023). 'This is the last episode': The association between problematic binge-watching and loneliness, emotion regulation, and sleep-related factors in poor sleepers. *Journal of Sleep Research*, 32(1), Article e13747. <https://doi.org/10.1111/jsr.13747>
- Alimoradi, Z., Jafari, E., Potenza, M. N., Lin, C. -Y., Wu, C. -Y., & Pakpour, A. H. (2022). Binge-watching and mental health problems: A systematic review and meta-analysis. *International Journal of Environmental Research and Public Health*, 19(15), Article e9707. <https://doi.org/10.3390/ijerph19159707>
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469–480. <https://doi.org/10.1037/0003-066x.55.5.469>
- Asgher, S., & Gohar, I. (2022). Binge watching on internet television networks & its effects on youth. *Journal of Media & Communication*, 3(1), 52–64.
- Baselgia, S., Combertaldi, S. L., Fahr, A., Wirz, D., Ort, A., & Rasch, B. (2023). Pre-sleep arousal induced by suspenseful series and cliffhangers have only minor effects on sleep: A sleep laboratory study. *Sleep Medicine*, 102, 186–198. <https://doi.org/10.1016/j.sleep.2023.01.005>
- Bernhold, Q. S., & Metzger, M. (2020). Older adults' parasocial relationships with favorite television characters and depressive symptoms. *Health Communication*, 35(2), 168–179. <https://doi.org/10.1080/10410236.2018.1548336>

- Billiaux, P., Billieux, J., Gärtner, L., Maurage, P., & Flayelle, M. (2022). Negative affect and problematic binge-watching: The mediating role of unconstructive ruminative thinking style. *Psychologica Belgica*, 62(1), 272–285. <https://doi.org/10.5334/pb.1163>
- Chang, Y. -J., & Peng, C. -Y. (2022). Exploring experiences of binge-watching and perceived addictiveness among binge-watchers: A qualitative study. *BMC Public Health*, 22, Article e2285. <https://doi.org/10.1186/s12889-022-14789-z>
- Chassiakos, Y. L. R., Radesky, J., Christakis, D. A., Moreno, M. A., & Cross, C. (2016). Children and adolescents and digital media. *Pediatrics*, 138(5), Article e20162593. <https://doi.org/10.1542/peds.2016-2593>
- Dixit, A., Marthoenis, M., Arafat, S. Y., Sharma, P. K., & Kar, S. K. (2020). Binge watching behavior during COVID 19 pandemic: A cross-sectional, cross-national online survey. *Psychiatry Research-Neuroimaging*, 289, Article e113089. <https://doi.org/10.1016/j.psychres.2020.113089>
- Dougherty, R. J., Hoang, T. D., Launer, L. J., Jacobs, D. R., Sidney, S., & Yaffe, K. (2022). Long-term television viewing patterns and gray matter brain volume in midlife. *Brain Imaging and Behavior*, 16(2), 637–644. <https://doi.org/10.1007/s11682-021-00534-4>
- Exelmans, L., & Van den Bulck, J. (2017). Binge viewing, sleep, and the role of pre-sleep arousal. *Journal of Clinical Sleep Medicine*, 13(8), 1001–1008. <https://doi.org/10.5664/jcsm.6704>
- Flayelle, M., Elhai, J. D., Maurage, P., Vögele, C., Brevers, D., Baggio, S., & Billieux, J. (2022). Identifying the psychological processes delineating non-harmful from problematic binge-watching: A machine learning analytical approach. *Telematics and Informatics*, 74, Article e101880. <https://doi.org/10.1016/j.tele.2022.101880>
- Flayelle, M., Maurage, P., Karila, L., Vögele, C., & Billieux, J. (2019). Overcoming the unitary exploration of binge-watching: A cluster analytical approach. *Journal of Behavioral Addictions*, 8(3), 586–602. <https://doi.org/10.1556/2006.8.2019.53>
- Gabbiadini, A., Baldissarri, C., Valtorta, R. R., Durante, F., & Mari, S. (2021). Loneliness, escapism, and identification with media characters:

- An exploration of the psychological factors underlying binge-watching tendency. *Frontiers in Psychology*, 12, Article e785970. <https://doi.org/10.3389/fpsyg.2021.785970>
- Gangadharbatla, H., Ackerman, C. T., & Bamford, A. (2019). Antecedents and consequences of binge-watching for college students. *First Monday*, 24(12). <https://doi.org/10.5210/fm.v24i12.9667>
- Gore, E. (2023, November 7). *The psychology of binge-watching and its implications for adult learning*. eLearning Industry. <https://elearningindustry.com/the-psychology-of-binge-watching-and-its-implications-for-adult-learning>
- Granow, V. C., Reinecke, L., & Ziegele, M. (2018). Binge-watching and psychological well-being: media use between lack of control and perceived autonomy. *Communication Research Reports*, 35(5), 392–401. <https://doi.org/10.1080/08824096.2018.1525347>
- Hoang, T. D., Reis, J. P., Zhu, N., Jacobs, D. R., Launer, L. J., Whitmer, R. A., Sidney, S., & Yaffe, K. (2016). Effect of early adult patterns of physical activity and television viewing on midlife cognitive function. *JAMA Psychiatry*, 73(1), 73–79. <https://doi.org/10.1001/jamapsychiatry.2015.2468>
- Ilyas, U., & Qureshi, A. W. (2020). Relationship between binge watching and cognitive functioning among university students in Lahore, Pakistan. *Rawal Medical Journal*, 45(3), 702–706. <https://rmj.org.pk/?mno=80755>
- Kilian, C., Bröckel, K. L., Overmeyer, R., Dieterich, R., & Endrass, T. (2020). Neural correlates of response inhibition and performance monitoring in binge watching. *International Journal of Psychophysiology*, 158, 1–8. <https://doi.org/10.1016/j.jippsycho.2020.09.003>
- Lades, L. K., Barbett, L., Daly, M., & Dombrowski, S. U. (2022). Self-control, goal interference, and the binge-watching experience: An event reconstruction study. *Computers in Human Behavior Reports*, 7(2), Article e100220. <https://doi.org/10.1016/j.chbr.2022.100220>
- Matrix, S. (2014). The Netflix effect: Teens, binge watching, and on-demand digital media trends. *Jeunesse, Young People, Texts, Cultures*, 6(1), 119–138. <https://doi.org/10.1353/jeu.2014.0002>

- Merrill, K. Jr., & Rubenking, B. (2019). Go long or go often: Influences on binge watching frequency and duration among college students. *Social Sciences*, 8(1), Article e10. <https://doi.org/10.3390/socsci8010010>
- Nee, R. C., & Barker, V. (2020). Co-viewing virtually: Social outcomes of second screening with televised and streamed content. *Television & New Media*, 21(7). <https://doi.org/10.1177/1527476419853450>
- Ong, J. J., Xia, Y., Smith-Mason, C. E., & Manber, R. (2018). A randomized controlled trial of mindfulness meditation for chronic insomnia: Effects on daytime symptoms and cognitive-emotional arousal. *Mindfulness*, 9(6), 1702–1712. <https://doi.org/10.1007/s12671-018-0911-6>
- Ort, A., Wirz, D. S., & Fahr, A. (2020). Is binge-watching addictive? Effects of motives for TV series use on the relationship between excessive media consumption and problematic viewing habits. *Addictive Behaviors Reports*, 13, Article e100325. <https://doi.org/10.1016/j.abrep.2020.100325>
- 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>
- Perks, L. G. (2019). Media marathoning and health coping. *Communication Studies*, 70(1), 19–35. <https://doi.org/10.1080/10510974.2018.1519837>
- Pittman, M., & Steiner, E. (2021). Distinguishing feast-watching from cringe-watching: Planned, social, and attentive binge-watching predicts increased well-being and decreased regret. *Convergence*, 27(5), 1507–1524. <https://doi.org/10.1177/1354856521999183>
- Raza, S. A., Yousaf, M. H., Sohail, F., Munawar, R., Ogadimma, E. C., & Siang, J. M. L. D. (2021). Investigating binge-watching adverse mental health outcomes during COVID-19 pandemic: Moderating role of screen time for web series using online streaming. *Psychology Research and Behavior Management*, 14, 1615–1629. <https://doi.org/10.2147/prbm.s328416>
- Rocke, K., Hays, P., Edwards, D. F., & Berg, C. D. (2008). Development of a performance assessment of executive function: The Children's Kitchen Task Assessment. *American Journal of Occupational Therapy*, 62(5), 528–537. <https://doi.org/10.5014/ajot.62.5.528>

- Rubenking, B., & Bracken, C. C. (2018). Binge-watching: A suspenseful, emotional, habit. *Communication Research Reports*, 35(5), 381–391. <https://doi.org/10.1080/08824096.2018.1525346>
- Salmon, J., Arundell, L., Hume, C., Brown, H., Hesketh, K. D., Dunstan, D. W., Daly, R. M., Pearson, N., Cerin, E., Moodie, M., Sheppard, L., Ball, K., Bagley, S. M., Paw, M. C. A., & Crawford, D. (2011). A cluster-randomized controlled trial to reduce sedentary behavior and promote physical activity and health of 8-9 year olds: The transform-us! Study. *BMC Public Health*, 11, Article e759. <https://doi.org/10.1186/1471-2458-11-759>
- Starosta, J., Izydorczyk, B., & Dobrowolska, M. (2020). Personality traits and motivation as factors associated with symptoms of problematic binge-watching. *Sustainability*, 12(14), Article e5810. <https://doi.org/10.3390/su12145810>
- Starosta, J., Izydorczyk, B., & Lizińczyk, S. (2019). Characteristics of people’s binge-watching behavior in the “entering into early adulthood” period of life. *Health Psychology Report*, 7(2), 149–164. <https://doi.org/10.5114/hpr.2019.83025>
- Starosta, J., Izydorczyk, B., & Wontoreczyk, A. (2021). Anxiety-depressive syndrome and binge-watching among young adults. *Frontiers in Psychology*, 12, Article e689944. <https://doi.org/10.3389/fpsyg.2021.689944>
- Starosta, J., Izydorczyk, B., Sitnik-Warchulska, K., & Lizińczyk, S. (2021). Impulsivity and difficulties in emotional regulation as predictors of binge-watching behaviours. *Frontiers in Psychiatry*, 12, Article e743870. <https://doi.org/10.3389/fpsyg.2021.743870>
- Sun, J. -J., & Chang, Y. -J. (2021). Associations of problematic binge-watching with depression, social interaction anxiety, and loneliness. *International Journal of Environmental Research and Public Health*, 18(3), Article e1168. <https://doi.org/10.3390/ijerph18031168>
- Sung, Y. H., Kang, E. Y., & Lee, W. -N. (2018). Why do we indulge? Exploring motivations for binge watching. *Journal of Broadcasting & Electronic Media*, 62(3), 408–426. <https://doi.org/10.1080/08838151.2018.1451851>

- Tavernier, R., & Willoughby, T. (2015). A longitudinal examination of the bidirectional association between sleep problems and social ties at university: The mediating role of emotion regulation. *Journal of Youth and Adolescence*, *44*(2), 317–330. <https://doi.org/10.1007/s10964-014-0107-x>
- Touitou, Y., Touitou, D., & Reinberg, A. (2016). Disruption of adolescents' circadian clock: The vicious circle of media use, exposure to light at night, sleep loss and risk behaviors. *Journal of Physiology-Paris*, *110*(4), 467–479. <https://doi.org/10.1016/j.jphysparis.2017.05.001>
- Vaterlaus, J. M., Spruance, L. A., Frantz, K., & Kruger, J. S. (2019). College student television binge watching: Conceptualization, gratifications, and perceived consequences. *Social Science Journal*, *56*(4), 470–479. <https://doi.org/10.1016/j.soscij.2018.10.004>
- Wheeler, K. S. (2015). *The relationships between television viewing behaviors, attachment, loneliness, depression, and psychological well-being* [Bachelor's thesis; Georgia Sothern University]. Digital Commons @ Georgia Sothern. <https://digitalcommons.georgiasouthern.edu/honors-theses/98/>
- Xia, L., Mo, L., Wang, J., Zhang, W., & Zhang, D. (2020). Trait anxiety attenuates response inhibition: Evidence from an ERP study using the go/nogo task. *Frontiers in Behavioral Neuroscience*, *14*, Article e00028. <https://doi.org/10.3389/fnbeh.2020.00028>