Review

Barriers and Facilitators to Binge-Watching Using the Theoretical Domains Framework

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Abstract: Using the Theoretical Domains Framework (TDF), this rapid review coded the barriers and facilitators to binge-watching and identified corresponding behaviour change techniques (BCTs) for intervention purposes. Twenty-nine studies reporting influences on binge-watching fulfilled the inclusion criteria and passed quality appraisal checks. Data were extracted and coded accordingly, as informed by the TDF. Findings indicate that most facilitators focused on the goals of binge-watching, such as escapism, and the social influences, such as companionship, while most barriers related to behavioural regulation, such as self-control and self-regulation. BCTs included 'Goal setting (outcome)', 'Social comparison', and 'Self-monitoring of behaviour'. Results suggest intervention strategies targeting facilitators to binge-watching by incorporating the identified BCTs may succeed in inhibiting binge-watching behaviours. However, accounting for the intensity of binge-watching was not an objective of the present review; therefore, future research should take into account the varying levels of engagement in binge-watching when developing interventions.

Keywords: binge-watching television; Theoretical Domains Framework; behaviour change techniques; facilitators; intervention strategies

1. Introduction

Technological advancements in the digital age have revolutionised television watching practices. Individuals are no longer restricted by the traditional television broadcasting system [1]. Instead, the emergence of online streaming services (e.g., Netflix and Amazon Prime) enables individuals to watch multiple episodes of a television series wherever, whenever, and on whatever device they desire [2]. Consequently, this flexibility is argued to contribute towards overindulgence in television watching, termed binge-watching [3]. The global average of minutes spent streaming Netflix has increased by 57.9% from 2017 to 2021, with an average of 3.2 h per day [4]. The term 'binge' itself holds a negative connotation [5], indicating excessive engagement [6]. As such, it is crucial to have a better understanding of this phenomenon to be able to ultimately mitigate this behaviour.

Binge-watching has garnered interest in research since it emerged as a concept in 2013, and researchers agree that binge-watching is a "relatively new behavioural phenomenon" [7]. However, a consensus on its definition has yet to be reached [2]. Some researchers report binge-watching as the "consumption of multiple episodes of a television series in a short period of time" [8], whereas others specify the number of episodes which constitute binge-watching [9,10]. Nevertheless, as summarised by Starosta and Izydorczyk (2020), the present review adopts the definition of binge-watching as "watching multiple episodes of a TV show in one sitting" [7].

As experienced by many individuals, binge-watching has become a frequent behaviour [11], particularly evident during the COVID-19 pandemic due to mandatory quarantines and social isolation restrictions. Individuals are reported to have spent an

increased amount of time binge-watching [12], far longer than any of the proposed definitions of binge-watching, indicating excessive engagement. For example, 87% of university students were reported to binge-watch for more than 3 h per week [13].

Despite students acknowledging binge-watching as a distraction from their academic responsibilities [14] and perceiving this behaviour as excessive [15], they report persistently engaging in it. Research has also shown an association between binge-watching and adverse health consequences. Mostly a solitary activity [16], binge-watching can also perpetuate feelings of loneliness and social isolation that result in individuals becoming "distant from friends and family" [17]. Relatedly, loneliness impacts an individual's mental health, especially in depression, which is reported to have a bi-directional effect with binge-watching [16]. Dandamudi and Sathiyaseelan (2018) documented an increased consumption of unhealthy foods, disturbances in sleep patterns, and prolonged sedentary activity in association with binge-watching [18]. Research also highlights its potentially addictive nature [3], and parallels are drawn between binge-watching and other behavioural addictions [19], including binge-drinking, binge-eating, and gaming disorder; binge-watching provides immediate gratification. The development of binge-watching as an addictive behaviour can be supported by the Interaction of Person–Affect–Cognition–Execution (I-PACE) model, whereby experiences of gratification received from binge-watching are associated with the behaviour [20], therefore resulting in a lack of self-control and an increased duration of binge-watching than initially intended [7]. However, as research in this area is still in its infancy, binge-watching has not yet been definitively established as an addictive behaviour [21].

Understanding behavioural influences is central to implementing successful behavioural change [22]. While technological advances, such as the auto-play function in streaming services, have been suggested to contribute to binge-watching [23], disabling this feature failed to result in a decrease in binge-watching consumption. Therefore, there is a continued need to systematically understand binge-watching in order to suggest feasible and effective intervention strategies. The current review explores binge-watching through a behavioural change perspective using the Behaviour Change Wheel (BCW) framework and, relatedly, the Theoretical Domains Framework (TDF) [24]. The prior literature utilised the TDF to inform the development and implementation of different behavioural interventions, including decrease in substance use [25] and alcohol consumption during pregnancy [26], showcasing its applicability as a guide to intervention development, specifically to conduct a behavioural diagnosis of binge-watching.

The TDF provides a well-rounded understanding of the development of behavioural interventions [27] by integrating core theoretical constructs from 83 behaviour change theories and summarising them into 14 domains (including Knowledge, Skills, Social Influences, and Behavioural Regulation, among others) [24]. This allows researchers to comprehensively study the affective, cognitive, environmental, and social influences on behaviour in context [22] and identify "categories of means by which an intervention can change behaviour" [28]. Additionally, TDF domains can be directly mapped onto the Behaviour Change Technique Taxonomy (BCTTv1) which is instrumental in the development of interventions from a behaviour change lens. Behaviour Change Techniques (BCTs) are the "observable, replicable, and irreducible components of an intervention" [24], or the "active ingredients" that can produce behavioural change. As such, pinpointing relevant BCTs for reducing binge-watching enables the identification of targeted intervention strategies to ensure successful behavioural change in this context [29,30].

Given the adverse health consequences and concerns regarding the potentially addictive nature of binge-watching, summative evidence is required to develop interventions for reducing the escalation of this behaviour. To address this need, the present study aims to (i) gain a better understanding of the influences on binge-watching and (ii) use these findings to propose targeted intervention strategies to support the development of successful interventions. Through a rapid review of the research, the present study answers two re-

search questions: (i) Using the TDF, what are the barriers and facilitators to binge-watching? and (ii) Using the BCTTv1, what BCTs can potentially reduce binge-watching?

2. Materials and Methods (See Supplementary Files)

2.1. Eligibility Criteria (Supplementary File S1)

Studies with definitions of binge-watching that explicitly encompass continuous consumption of multiple episodes of the same series in a single sitting were included. The criteria for inclusion also comprised those studies which (i) were published in English; (ii) were published between 2017 and June 2021; (iii) were focused on the motivations behind binge-watching; (iv) had participants aged between 18 and 24 years; and (v) were published in a journal.

2.2. Search Strategy (Supplementary File S2)

A search was conducted using six electronic databases, which included PsycInfo, Ovid MEDLINE, Embase, Web of Science, Scopus, and PubMed. The searches of the 6 databases generated a total of 867 studies. Initial screening of the titles and abstracts resulted in 269 studies that were potentially relevant to the present review. Finally, full text screening resulted in 29 studies, which were included for data extraction and were exported to a data managing and analysis software, EPPI-Reviewer [31] (https://eppi.ioe.ac.uk/cms/ accessed on 5 August 2024).

2.3. Quality Assessment (Supplementary File S3)

The first author conducted quality assessments on the final 29 studies. Qualitative studies (7 studies) and systematic reviews (2 studies) were assessed using the Critical Appraisal Skills Programme checklists. Quantitative (16 studies) and mixed methods studies (4 studies) were assessed using the respective sections of the Mixed Methods Appraisal Tool (MMAT; [32]). No studies were excluded based on quality.

2.4. Data Extraction Process (Supplementary File S4)

To ensure consistent data were collected and recorded among the included studies, two standardised data extraction forms were produced, one with the administrative details and content of study, and another to document barriers and facilitators. The first form was used to collect data on administrative details of each study, such as the authors, year, definition of binge-watching, study aims, research questions, and method of data analysis, among others. The second form documented barriers and facilitators to binge-watching. Verbatim quotes were recorded with page numbers. A coding guidebook was produced, with additional codes added iteratively to aid in data extraction. The first author read all 29 of the studies and excluded data where appropriate. For reliability, the second author independently extracted data from 25% of the studies. Findings were compared and discussed until an agreement was reached, and changes were made accordingly.

2.5. Data Analysis

Extracted data were deductively coded in line with the 14 domains of the TDF. Identified domains were then mapped onto relevant BCTs within the BCTTv1 in accordance with the matrix of domains [24]. This was followed by applying the APEASE (affordability, practicability, effectiveness, acceptability, side effects/safety, and equity) criteria [24] to determine the most applicable BCTs in this context. In addition, each theme was coded as either a barrier or a facilitator of binge-watching, depending on whether the theme prevents or encourages binge-watching. Inductive analysis was then conducted to (i) identify common themes and (ii) synthesise data into global and sub-themes. The first author coded all of the studies, and the second author independently coded 25% of the studies to ensure reliability. Coding was compared, and changes were made where appropriate.

3. Results

3.1. Study Characteristics (Supplementary File S5)

Of the 29 included studies, 9 studies were qualitative studies, 16 studies were quantitative (2 of which were systematic reviews), and the remaining 4 studies were mixed methods. Of these, 11 studies were conducted in the United States, 4 in Belgium, 3 in Poland, 2 each in South Korea and the United Arab Emirates, and 1 in each of the following countries: China, Croatia, Germany, India, Italy, Portugal, and the United Kingdom. Only six studies specifically targeted university students, whereas participants of the other studies ranged from 14 years to 86 years. Studies were published between 2017 and 2021.

3.2. Deductive Analysis (Supplementary File S6)

All 29 studies mapped onto a minimum of 2 and a maximum of 11 TDF domains. The highest number of studies representing the Goals domain, with 21 out of 29 studies. This was followed by Social Influences and Behavioural Regulation, with both represented in 18 out of 29 studies, then Reinforcement, and Environmental Context and Resources, which were each found in 13 studies. Emotion was represented in 10 studies, while both Memory, Attention, and Decision Processes and Intentions were represented in 7 studies, and Beliefs about Consequences in 6 studies. The least represented domains were Beliefs about Capabilities (three studies); Knowledge (two studies), Social/Professional Role and Identity (two studies), and, lastly, Skills (one study). Optimism was the only TDF domain not found in any study.

Moreover, a total of 228 items were identified, of which 216 items were coded as facilitators and 12 items were coded as barriers to binge-watching. TDF domains with the highest and lowest numbers of facilitators and barriers are described below (see Supplementary File S7 for more in-depth detail). Social Influences had the highest number of facilitators (52 out of 216 items), including "perceived pressure to be up to date" [33]. This was closely followed by Goals (47 items) such as to "distract themselves" [5]. The TDF domains with the lowest numbers of facilitators included Beliefs about Consequences (five items, e.g., "seeking out and feeling suspense and anticipation" [5]) and Beliefs about Capabilities (two items, e.g., "a sense of accomplishment when finishing a season or series" [5]).

Regarding the barriers to binge-watching, 3 out of 12 items were coded within the Memory, Attention, and Decision Processes domain. These barriers include "users are cognitively aware and spend the mental energy to complete the series" [34]. Three items were coded within the Behavioural Regulation domain, including "as long as I don't have work or study the next day" [35]. Barriers were not identified in the following domains: Goals, Social Influences, Reinforcement, Environmental Context and Resources, Intentions, Social/Professional Role and Identity, and Skills.

Following the identification of the relevant TDF domains, the results were used to guide the selection of BCTs that would be most appropriate for intervention purposes in the context of binge-watching. Using the BCW framework, the majority of BCTs identified were mapped to the TDF domains of Goals and Social Influences, implying that BCTs targeting these domains are more likely to influence binge-watching. Under the Goals domain, identified BCTs include 'Review of behaviour goals', and 'Goal setting behaviour'. Under the Social Influences domain, identified BCTs included 'Beliefs about consequences', 'Vicarious reinforcement', and 'Identification of self as a role model' (see Supplementary File S8 for full list of relevant BCTs).

3.3. Inductive Analysis (Supplementary File S7)

Inductive analysis generated 47 global themes and 15 sub-themes among the 14 TDF domains. Table 1 provides an overview of the frequency of the representative studies, global themes, and sub-themes, in addition to the numbers of facilitators and barriers identified. Domains that were represented in higher numbers of studies were judged with high importance in influencing binge-watching behaviours. Table 2 provides an overview of the themes identified and whether each was coded as a facilitator and/or

barrier. The first six TDF domains, listed from the highest numbers of supporting studies and themes/sub-themes, that are represented in five or more studies are described below.

Table 1. Overview of the TDF domains and the number of identified global themes and sub-themes.

TDF Domain	Number of Studies Represented	Number of Global Themes Identified	Number of Sub-Themes Identified	Number of Items as Facilitators	Number of Items as Barriers	Total Number of Items
Goals	21	8	7	47	0	47
Social influences	18	7	2	52	0	52
Behavioural regulation	18	6	4	23	3	26
Reinforcement	13	5	0	27	0	27
Environmental context and resources	13	3	2	27	0	27
Emotion	10	4	0	13	2	15
Intentions	7	3	0	10	0	10
Memory, attention, and decision processes	7	3	0	6	3	9
Beliefs about consequences	6	2	0	5	1	6
Beliefs about capabilities	3	3	0	2	2	4
Knowledge	2	1	0	1	1	2
Social/professional role and identity	2	1	0	2	0	2
Skills	1	1	0	1	0	1
Total number of items	-	47	15	216	12	228

Note. TDF domains are presented in rank order, based on the highest number of supporting studies, followed by the number of global themes and sub-themes. The 'Optimism' domain was excluded from the table because it was not represented by any of the included studies.

Table 2. Overview of key themes, facilitators, and barriers to binge-watching.

Global Theme	Sub-Theme	Facilitator, Barrier or Both?
Goals	Escapism	Facilitator
	Seek entertainment	Facilitator
	Avoid boredom	Facilitator
	Self-improvement	Facilitator
Social influences	Companionship	Facilitator
	Social pressure	Facilitator
	Social support	Facilitator
Behavioural regulation	Self-control	Both
	Self-regulation	Both
Reinforcement	Content of TV series	Facilitator
	General reinforcement	Facilitator
	Rewards	Facilitator
Environmental context and resources	Availability of resources	Facilitator
Emotion	Emotion elicitation	Facilitator
	Negative affect	Facilitator
	Isolation	Facilitator

3.4. Goals (21 Studies)

All items within this domain were categorised as facilitators to binge-watching; eight global themes and seven sub-themes were identified.

3.4.1. Escapism (12 Studies, 5 Sub-Themes)

This theme can be understood as having the intention to be distracted from the reality of everyday life. Participants responded that their intention in binge-watching was to escape, specifically from life stressors including employment, education, peer pressure, and general stresses.

3.4.2. Seek Entertainment (Nine Studies)

Participants reported engaging in binge-watching as a means of seeking entertainment. Entertainment is reported to have a significant influence on individuals' attitude about binge-watching [36], resulting in the tendency to engage in binge-watching when seeking eudaemonic entertainment [37].

3.4.3. Avoid Boredom (Six Studies, Two Sub-Themes)

Several participants reported binge-watching as a way of spending their leisure time [38]. Some specified having free time in their schedules [39] and engaging in binge-watching to avoid feelings of boredom [40].

3.4.4. Self-Improvement (Five Studies)

Participants reported binge-watching for personal enrichment purposes [37]. For instance, some reported watching historical shows and documentaries to improve their knowledge of these topics and gain new information about the topic [39].

3.5. Social Influences (18 Studies)

Items coded into this TDF domain were all facilitators to binge-watching and generated seven global themes and two sub-themes.

3.5.1. Companionship (16 Studies; 2 Sub-Themes)

Some participants reported that they formed emotional connections with the characters of the TV series and perceived these characters as "ideal companions" [41]. Alternatively, binge-watching was perceived as an opportunity for social engagement, enabling individuals to spend time with their significant others, friends, and/or family [42].

3.5.2. Social Pressure (Six Studies)

Participants reported that their engagement with binge-watching was attributed to perceived pressures from their social groups. Some claimed they binge-watch to avoid feeling left out and to be accepted by their social peers [33]. Notably, one study reported that participants binge-watched to avoid encountering spoilers of the series they were consuming [43].

3.5.3. Social Support (Five Studies)

Receiving recommendations and feedback about a TV series was reported to facilitate binge-watching [42]. Some participants reported an increase in motivation for binge-watching when the TV series was recommended to them [7]. Alternatively, others claimed that they often share reactions or commentaries with their friends, which made binge-watching more interesting [35].

3.6. Behavioural Regulation (18 Studies)

Of the 27 items that were coded within this domain, 24 were facilitators to binge-watching, whereas the remaining 3 items were barriers. Six global themes and four sub-themes were identified.

3.6.1. Self-Control (12 Studies, 2 Sub-Themes)

This theme can be coded as both a facilitator and a barrier, depending on the context. Respondents who were able to control themselves from engaging in binge-watching sessions could either choose to continue their media consumption activities (facilitator) [44] or refrain from watching multiple episodes consecutively (barrier) [45]. In fact, individuals with high self-control were reported to have a reduced tendency to binge-watch, compared to individuals with low self-control [38]. Similarly, several studies reported that higher levels of impulsivity and urgency were correlated with increased levels of unintended binge-watching sessions [46].

3.6.2. Self-Regulation (Five Studies, Two Sub-Themes)

Some studies reported self-regulation to be a "significant negative predictor of binge-watching frequency" [47], where binge-watching reduces individuals' level of self-regulation [35]; thus, this was considered a barrier to binge-watching. However, another study reported self-regulation as facilitative of binge-watching, as participants engaged in binge-watching for the purpose of regulating their emotions [41].

3.7. Reinforcement (13 Studies)

All items under this TDF domain were coded as facilitators to binge-watching. Five global themes were identified.

3.7.1. Content of TV Series (Five Studies)

The genre and content of a TV series were commonly reported to facilitate binge-watching. Participants reported binge-watching dramatic and suspenseful TV series [41] and commented that some series have plotlines which develop over several episodes, encouraging them to continue to watch the next few episodes to see what happens [48].

3.7.2. General Reinforcement (Five Studies)

Several studies reported that binge-watching was reinforced. More practice meant more time binge-watching [42]. Participants also claimed that ending a binge-watching session disrupted their experience of 'flow'; thus, binge-watching was reinforced to avoid this disruption [42].

3.7.3. Rewards (Five Studies)

For some, binge-watching was perceived as intrinsically rewarding, hence facilitating it. Participants engaged in this behaviour to psychologically reward themselves "for accomplishing responsibilities" [17] and "after a stressful or long day" [41].

3.8. Environmental Context and Resources (13 Studies)

All items coded within this domain were facilitators to binge-watching. Three global themes were identified.

Availability of Resources (13 Studies, 2 Sub-Themes)

The availability of a TV series was a facilitator of binge-watching. Participants' unlimited access to a TV series via Netflix or Amazon Prime, along with other unofficial websites [35], added to their binge-watching tendencies. Some also reported that binge-watching occurs because all episodes of TV series are released at once [48]. Alternatively, participants noted that Netflix's auto-play function facilitated binge-watching and made it more difficult to actively stop streaming [43]. Technological advancements also facilitate this behaviour, due to the convenience of using portable devices, such as laptops and mobile phones, to binge-watch [35].

3.9. Emotion (10 Studies)

Of 15 items coded into this TDF domain, 13 were facilitators and 2 were barriers to binge-watching, resulting in 4 global themes.

3.9.1. Emotion Elicitation (Six Studies)

Participants reported binge-watching to increase their positive emotions, thus facilitating their behaviour. They binge-watched to enhance their positive mood and binge on sitcoms so that "they could laugh and feel good" [41].

3.9.2. Negative Affect (Seven Studies)

Some participants reported binge-watching to reduce their negative emotions, again facilitating this behaviour. Females, specifically, chose to binge-watch when they were

experiencing higher levels of anxiety and stress [12]. One study reported that individuals experienced psychological discomfort when their consumption of TV series was limited; thus, they continued to consume content to reduce their discomfort [39].

3.9.3. Isolation (Four Studies)

Some participants binge-watched because "none of [the] family members join me in any activity" [35], whereas others reported binge-watching alone to fully concentrate and avoid interruptions [35]. Binge-watching was also used to compensate for feelings of loneliness [39].

4. Discussion

No studies to date have systematically examined the barriers and facilitators to binge-watching to inform the design of interventions to reduce this behaviour. The present rapid review sought to provide a novel understanding of binge-watching from a behaviour change perspective. Using the TDF, this study investigated the barriers and facilitators to binge-watching, and then identified corresponding BCTs to target behavioural change in this context.

All but one of the TDF domains (Optimism) were found to be relevant to binge-watching. The domain of Goals was the most strongly represented (72% of the included studies), followed by the TDF domains of Social Influences (62%), Behavioural Regulation (62%), Reinforcement (49%), Environmental Context and Resources (49%), and Emotion (35%). Consequently, interventions that target these domains are most likely to be successful in reducing binge-watching. On the other hand, the least represented TDF domains were Beliefs about Consequences (21% of the included studies), Beliefs about Capabilities (10%), Knowledge (7%), Social/Professional Role and Identity (7%), and, lastly, Skills (4%).

4.1. Barriers and Facilitators to Binge-Watching

The first research question aimed to comprehensively understand the barriers and facilitators to binge-watching, and the deductive analysis demonstrated that the facilitators outweighed the barriers. Supported by 18 of the 29 studies, most facilitators were found to be relevant within the Social Influences domain. This suggests that participants' engagement in binge-watching was highly influenced by interpersonal processes between themselves and others. Participants who experienced feelings of loneliness binge-watched for a sense of companionship. On the other hand, binge-watching itself can give rise to feelings of loneliness and isolation [16,17] resulting in a vicious cycle. Participants also binge-watched because of social influences, including social norms, recommendations from peers, or wanting to fit in with a particular social group [42].

In addition to this, many facilitators were attributed to the TDF domain of Goals. This domain indicated that participants actively sought to engage in binge-watching as a way of attaining their goals. Nearly half of the supporting studies in this review suggested that individuals have the tendency to binge-watch TV series for the purpose of escaping from work, academic, and social pressures, and as a way of procrastinating [17]. In addition, spending copious amounts of time immersing themselves in a TV series as a method of relaxation can help an individual to lose track of time and temporarily forget about their obligations in life. While the previous literature has found an association between binge-watching and increased stress [49], alternate findings suggest that binge-watching can also be used as a stress management tool and a diversion strategy [17].

Regarding barriers, most were relevant to the Memory, Attention, and Decision Processes and Behavioural Regulation domains. Studies within this review suggested that binge-watching requires individuals to exert mental energy to complete the consumption of a TV series. Subsequently, individuals would experience mental fatigue because of cognitive overload, indicating that having the intention to avoid such mental fatigue could therefore reduce the likelihood of binge-watching. Prior studies have also shown an association between binge-watching and poorer sleep quality, resulting in higher levels of

tiredness [50]. In addition, individuals with a higher level of self-control were better at refraining from binge-watching; hence, self-control can be understood as a moderator for the consumption of binge-watching. The immediate gratification associated with binge-watching can result in a lack of self-control, and individuals may end up binge-watching longer than they intended to [7].

4.2. Proposed BCTs to Incorporate in Interventions to Reduce Binge-Watching

The second research question sought to identify potential intervention strategies that may reduce binge-watching behaviours. BCTs identified included 'Vicarious reinforcement', 'Identification of self as role model', 'Goal setting (behaviour)', and 'Review behaviour goals'. It is suggested that behavioural interventions incorporating these BCTs may be more effective in reducing binge-watching. Consequently, potential interventions may involve (i) reviewing the extent to which binge-watching results in the achievement of goals and (ii) increasing awareness of the negative consequences of prolonged binge-watching.

4.2.1. Reviewing the Extent to Which Binge-Watching Results in Achievement of Goals

This recommendation aligns with the BCTs of 'Goal setting (behaviour)' and 'Review behaviour goals'. The majority of studies suggest that individuals are motivated to binge-watch to achieve a certain goal. Prior research highlighting motivators and positive outcomes of binge-watching found that 'self-determination' acted as a motivator and accompanied positive emotions, such as increased feelings of competence and relatedness [45]. Bandura's (1997) Social Cognitive Theory posits that behaviour is partly determined by 'proximal goals', and prior studies have shown that individuals' addictive behaviours can be guided by a means to 'escape' self-awareness [51]. In line with the BCT of 'Review outcome goal(s)', individuals could actively set a goal to achieve as a result of their binge-watching session. For example, "I will watch two episodes in one sitting to de-stress". Along with the BCT of 'Review outcome goal(s)', individuals can then review the extent to which binge-watching fulfilled these goals, which can therefore result in an enhanced self-awareness of binge-watching outcomes. Continuing with this example, the individual could consider their stress levels post-binge-watching and assess whether their continued binge-watching was helpful in reducing their stress levels or not. If their stress levels were unchanged or even increased, it may encourage individuals to find alternative, healthier ways of de-stressing, such as exercising or spending time in nature.

Similarly, providing feedback on individuals' binge-watching consumption, including the frequency, duration, and intensity, could increase self-awareness of their behaviours. Providing feedback has been demonstrated as an effective intervention strategy in targeting similar bingeable behaviours, including gambling, binge-eating, and alcohol misuse [52]. Feedback can motivate, provide a means of social comparison, and help individuals consider their decisions regarding binge-watching in a new light [53]. In addition, individuals could be informed of the negative consequences of binge-watching when they have performed this behaviour for long periods of time, thereby creating expectations of punishments. Therefore, intervention strategies that address the time spent binge-watching could, in turn, encourage individuals to either take regular breaks or to search for alternative methods to attain those goals.

4.2.2. Increasing Awareness of the Consequences of Prolonged Binge-Watching Sessions

Alongside self-reflection on behaviours, increasing awareness of the negative consequences of binge-watching sessions could be a useful intervention strategy to curbing this behaviour. As studies have attributed the occurrence of binge-watching to social influences, such as modelling and peer pressure, increasing awareness of the negative consequences of binge-watching through BCTs, such as 'Vicarious reinforcement', may be helpful. Researchers have found that reinforcement can be particularly useful in addressing behavioural addictions, such as gambling and internet gaming disorder [54]. In respect to binge-watching, observing fatigue due to lack of sleep could be used to educate individuals

and increase their awareness of the drawbacks to binge-watching. Subsequently, this could deter them from engaging in prolonged binge-watching sessions. Therefore, future interventions should aim to encourage individuals to reduce their binge-watching behaviours through prompts to remind them of the consequences of binge-watching.

4.3. Strengths and Limitations of the Present Review

Adding to the previous literature, which explored the motivations and influences of binge-watching, the present review offers a novel and comprehensive understanding of the barriers and facilitators to the binge-watching phenomenon. In addition, the findings of this review also have implications for the field of behavioural change, through offering recommendations for intervention strategies that were informed by the BCTTv1 to target binge-watching, demonstrating a systematic approach in understanding this behaviour. The use of TDF in the deductive analysis ensured that data were considered using a theoretical behaviour change framework. The generation of global themes and sub-themes in the inductive analysis also ensured that more granular barriers and facilitators to binge-watching were identified.

With respect to limitations, Boursier and colleagues (2021) differentiated binge-watching into two categories: "high but healthy engagement" and "problematic and uncontrolled watching behaviour" [12]. This suggests that, depending on which category an individual's behaviour pertains to, the effectiveness of recommendations in this review may not be as significant in encouraging behavioural change. However, accounting for disparities in the intensity of binge-watching was not an objective of the present review; thus, recommendations cannot be made specifically regarding the different categories of binge-watchers. Another limitation is that, due to time restrictions, title and abstract screening and quality assessment checks could not be conducted by a second reviewer, and potential biases may exist as a result. Nevertheless, there were limited disagreements between the primary and secondary coders during the data extraction process. Consequently, this is not regarded as a major limitation to the present review.

Lastly, the TDF currently lacks explicit guidance with regards to coding barriers and facilitators to binge-watching, especially as this represents a novel application for the TDF. For example, items within the 'Content of the TV series' global theme was originally coded into the 'Environmental context and resources' domain, which was defined as "any circumstance of a person's situation or environment that discourages or encourages the development of skills and abilities, independence, social competence, and adaptive behaviour" [22]. Items within this global theme were initially interpreted as an environmental circumstance that influenced binge-watching. However, after discussions among the authors, it was later interpreted that individuals have reinforced the content of the TV series, such as the suspense and dramatic content, with the behaviour of consuming such series in a binge manner. Subsequently, coding was revised, and items were coded into the 'Reinforcement' domain. Nevertheless, this study informs future studies examining barriers and facilitators to addictive behaviours like binge-watching using the TDF.

5. Conclusions

Six theoretical domains were identified to be the most influential on the behaviour of binge-watching. Among these, facilitators included goals to increase knowledge about the topic of interest, social pressures to avoid feeling left out, the development of this behaviour as a habit, the use of binge-watching as a reward, the wide range of available sources from which to binge-watch, and, lastly, the elevation of positive emotions. Contrastingly, main barriers were identified within the 'Behavioural Regulation' domain of the TDF, including high levels of self-control to refrain from binge-watching, as well as having the ability to monitor one's own behaviour and recognise when it is appropriate to binge-watch. This study provides a better understanding of binge-watching as a behaviour using the Behaviour Change Wheel framework and especially the TDF. This rapid review also has practical implications in identifying facilitators to binge-watching, which can also be used

as markers or risk factors of future problematic viewing behaviours. Furthermore, as binge-watching has not yet been identified as an 'addiction', future comparative research on addictive behaviours, especially in relation to symptoms and consequences, can aid in developing a more universal definition and classification of binge-watching.

The findings of the present review provide preliminary recommendations for intervention strategies targeting the phenomenon of binge-watching. These represent a first step in developing and testing intervention strategies for problematic binge-watching and helping to mitigate its associated adverse health consequences. Consideration of the recommended BCTs in this rapid review, and in future studies, can ultimately result in sustained and long-term success in ensuring that behaviours such as binge-watching can be regulated. Scholars and industry professionals alike can take the recommendations presented in this study into account and evaluate their applicability in the context of interventions for reducing binge-watching.

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