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RELATIONS BETWEEN BINGE-WATCHING, EMOTION REGULATION, AND DEPRESSION IN YOUNG ADULTS

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Binge-watching (BW; i.e., watching multiple episodes of a TV series in a row) has become a popular way of TV consumption, leading to concerns about its potentially addictive features. Yet, few data are available regarding the psychological determinants of BW in young adults. Thus, the present study investigated the associations between BW, emotion regulation, and depression in a sample of 332 participants between 16 and 20 years of age. The results of the path analysis showed that gender and cognitive reappraisal predicted both positive and negative BW experiences, whereas out-of-control emotionality and emotional confusion predicted only negative BW experiences. Similarities and differences with previous studies are discussed.

Keywords: Binge-watching; Emotion regulation; Depression; Young adults; Cognitive reappraisal.

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In the past two decades, the development of on-demand viewing services and online streaming has produced a substantial change in the way in which people consume TV. In particular, entire TV series have become permanently available at reasonable prices, making it possible for viewers to watch several episodes in a row. Although there have been disagreements in the literature, many researchers use the term "binge-watching" (BW) to refer to the behavior of watching two or more episodes of a TV series in one sitting (Starosta & Izydorczyk, 2020). More recent advances have made use of standardized self-report questionnaires and have defined BW through a 7-factor model (including engagement, positive emotions, pleasure preservation, desire-savoring, binge-watching, dependency, and loss of control; Flayelle, Canale, et al., 2019). The most updated reviews report that the average prevalence of BW ranges from 44.6 to 98% (with a mean level of 72.14%; Flayelle, Maurage, et al., 2020), suggesting that it is not an atypical viewing practice, but rather the norm.

Previous studies have highlighted both the negative and the positive aspects of BW (Flayelle, Maurage, et al., 2020). On the one hand, this behavior has been a priori conceptualized as a new addictive disorder, which may resemble substance-related or behavioral dependencies and may be therefore linked to problematic consequences, such as neglect of duties, sleeping problems, social withdrawal, loss of control and watching to cope with negative emotions (e.g., Alfonsi et al., 2023). Other scholars have instead emphasized the fact that BW represents, in most cases, a leisure activity driven by recreational motivations, with a negligible impact on everyday life (e.g., Billieux et al., 2015).

The heterogeneous and multifaceted nature of BW has been confirmed by Flayelle, Maurage, and colleagues (2019), who used cluster analysis to classify 4,039 TV series viewers. The results revealed four different groups: recreational TV series viewers (low BW involvement), regulated binge-watchers (moderate BW involvement), avid binge-watchers (elevated but nonproblematic BW involvement), and unregulated binge-watchers (problematic BW involvement associated with negative outcomes). A similar approach was taken by Favieri et al. (2023), who classified their participants into problematic BW, moderate BW, non-BW, and no-viewer. Importantly, the problematic BW group reported higher trait anxiety, higher social phobia, higher depression, higher alexithymia, and higher attentional and motor impulsivity than all other groups. Taken together, these findings suggest that only problematic BW may be linked to adverse psychological outcomes, a conclusion further supported by a longitudinal study conducted by Sigre-Leirós et al. (2023) during the COVID-19 pandemic. These authors found that male gender and watching TV series for social motives predicted a decrease in negative affect six weeks later, whereas a BW pattern characterized by loss of control predicted an increase in negative affect over time. Given these premises, it seems of utmost importance to determine which personality dimensions predispose individuals to develop problematic BW engagement.

According to the interaction of the person-affect-cognition-execution (I-PACE) model for addictive behaviors (Brand et al., 2019), the development of addictive behaviors depends on the interaction between individuals' predisposing variables and specific situational factors. The overarching idea is that the perception of external or internal triggers (e.g., negative mood) may result in cognitive and emotional reactions, such as increased attention to addiction-related stimuli or urges to behave in specific ways (e.g., to watch TV series). The decision to engage in addictive behaviors would be driven by an increased reliance on the impulsive/reactive system (possibly subserved by limbic structures) and/or by a decreased activity of the reflective/deliberative system (possibly driven by prefrontal cortices). Adopting this interactional perspective, prior research has begun to document the emotional and clinical correlates of BW behaviors. Steins-Loeber et al. (2020), for example, found that, although binge-watchers were no more depressed than non-binge-watchers, impulsivity was positively associated with loss of control and neglect of duties, while depressive symptoms were positively associated with craving/social problems and neglect of duties. Similar findings were observed by Flayelle, Castro-Calvo, et al. (2020) in a cross-cultural assessment of BW and by Starosta, Izydorczyk, & Wontorczyk (2021), who reported that the anxiety-depressive syndrome had a direct and significant effect on symptoms of problematic BW.

Difficulties in regulating one's own emotions or the use of dysfunctional strategies may represent another pathway toward the development of problematic BW. Working in this direction, Starosta, Izydorczyk, Sitnik-Warchulska, et al. (2021) showed that the number of episodes watched in one BW session was positively predicted by lack of emotional clarity, limited access to emotion regulation strategies, and impulse control difficulties, but negatively predicted by lack of emotional awareness. The frequency of BW sessions in one month was instead negatively predicted by difficulties engaging in goal-directed behavior. The authors concluded that people watch multiple episodes of TV series to compensate for their inability to understand and cope with their emotions.

While the above studies provided important evidence, several issues have not been thoroughly addressed yet. First, the roles of emotion regulation difficulties and depression have been examined in different studies, making it difficult to understand the joint contributions of these variables. Second, no study, to our knowledge, has assessed the involvement of expressive suppression and cognitive reappraisal (two critical emotion regulation strategies, according to Gross & John, 2003) in BW behaviors. Finally, most of the above-mentioned studies have been conducted in the general population or young adults between 18 and 30 years (Starosta et al., 2019). Few data are instead available on young adults in-between adolescence and adulthood (i.e., who are between 16 and 20 years of age), even though they engage frequently in BW for a variety of

reasons, including social acceptance, fear of missing out (FOMO), escapism, psychological satisfaction, cognitive stimulation, boredom relief, and coping with loneliness (Kumar et al., 2021; Shim & Kim, 2018). Examining the impact of BW on young adults who are making their transition into adulthood is also important because of cross-sectional evidence indicating that the link between BW behaviors and mood disorders may be particularly pronounced in this period. Özkent and Açıkel (2022), for example, conducted an online survey of 189 Turkish adolescents and found that 60.3% of them could be categorized into the binge-watcher group; furthermore, in the overall sample, a high frequency of BW was associated with emotional, conduct, and cognitive issues, and inattention.

Considering these problems, the present study examined the associations between BW, difficulties in emotion regulation, use of emotion regulation strategies, and depression in a relatively large sample of Italian young adults between 16 and 20 years of age. Based on previous studies, we expected to find significant correlations between BW and emotion regulation difficulties (Starosta, Izydorczyk, Sitnik-Warchulska, et al., 2021), and between BW and depression (Starosta, Izydorczyk, & Wontorczyk, 2021; Steins-Loeber et al., 2020). While our primary aim concerned the identification of the concurrent predictors of BW, we were also interested in the investigation of potential gender differences. Steins-Loeber et al. (2020) found that gender predicted several aspects of BW, including loss of control, craving/social problems, and neglect of duties, such that females were more inclined to the development of a BW addiction. Furthermore, small but significant correlations between gender and BW were reported by Flayelle, Canale, et al. (2020) in a cross-cultural validation of the Binge-Watching Engagement and Symptoms Questionnaire (BWESQ). In the Italian subsample, in particular, gender was significantly associated with the positive emotions, desire-savoring, and loss of control subscales, with females achieving higher scores than males. Based on this evidence, we aimed to a) replicate the higher engagement of females in BW behaviors, and b) determine whether gender differences were, partially or totally, mediated by corresponding differences in emotion regulation or depression.

Method

Participants

A total of 332 young adults between 16 and 20 years of age (185 females; M = 17.6, SD = 0.78) were recruited for the present study. They lived near Varese (Italy) and attended the fourth (n = 170) or fifth (n = 162) year of an Italian high school.[1] Most of them were born in Italy (n = 311) and had Italian citizenship (n = 317, including five participants with dual citizenship).

Measures

Binge-watching engagement and symptoms. The Binge-Watching Engagement and Symptoms Questionnaire (BWESQ) is a 40-item questionnaire intended to measure engagement in BW behaviors (Flayelle, Canale, et al., 2019; Italian version by Flayelle, Castro-Calvo, et al., 2020). It is composed of seven subscales assessing engagement (BWESQ/ENG; eight items, e.g.: "I'm always looking for new TV series to watch"; α = .84), positive emotions (BWESQ/PEM; five items, e.g.: "Watching TV series is a cause for joy and enthusiasm in my life"; α = .79), desire-savoring (BWESQ/DS; six items, e.g.: "I get really excited when a new episode is released"; α = .85), pleasure preservation (BWESQ/PLP; three items, e.g.: "I worry about getting spoiled"; α = .72), binge-watching (BWESQ/BW; six items, e.g.: "I always need to watch more episodes to

feel satisfied"; α = .80), dependency (BWESQ/DP; five items, e.g.: "I get tense, irritated or agitated when I can't watch my favourite TV series"; α = .67), and loss of control (BWESQ/LC; seven items, e.g.: "I watch more TV series than I should"; α = .81). Participants were asked to indicate their agreement with each item, with responses ranging from 1 (*strongly disagree*) to 4 (*strongly agree*).

To reduce the number of measures, we performed an exploratory factor analysis on the seven subscales of the BWESQ, using the principal axis factoring estimation method and an oblimin rotation. The number of to-be-retained factors was established through parallel analysis (Horn, 1965). The results were consistent with a distinction previously proposed by Richard and Plante (2023). Based on the correlations with psychological well-being measures, these authors proposed a distinction between a "negative BW experience" (i.e., the sum of the BWESQ/LC, BWESQ/DP, and BWESQ/BW subscales) and a "positive BW experience" (i.e., the sum of the BWESQ/ENG, BWESQ/DS, and BWESQ/PEM subscales). In agreement, our analysis indicated the presence of two factors. The first factor was saturated by the BWESQ/DS (0.93), BWESQ/PEM (0.77), BWESQ/ENG (0.74), and BWESQ/PLP (0.68) subscales, and therefore corresponded to the positive BW experience (PBWE) dimension. The second factor, on the other hand, was saturated by the BWESQ/LC (0.92) and BWESQ/DP (0.57) subscales, and therefore corresponded to the negative BW experience (NBWE) dimension. The subscale BWESQ/BW saturated on both dimensions, albeit more strongly on NBWE (0.52 vs. 0.43). Interestingly, the two factors were highly correlated with each other (0.71).

Difficulties in emotion regulation. The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004; Italian version by Sighinolfi et al., 2010) was used to assess emotion dysregulation. It is a 36-item questionnaire tapping six factors: nonacceptance of emotional responses (DERS/NER; six items, e.g.: "When I'm upset, I feel guilty for feeling that way"; α = .88), difficulties engaging in goal-directed behavior (DERS/DEGDB; five items, e.g.: "When I'm upset, I have difficulty concentrating"; α = .86), impulse control difficulties (DERS/ICD; six items, e.g.: "When I'm upset, I lose control over my behaviors"; α = .88), lack of emotional awareness (DERS/LEA; six items, e.g.: "I am attentive to my feelings"; α = .76), limited access to emotion regulation strategies (DERS/LAERS; eight items, e.g.: "When I'm upset, I believe that there is nothing I can do to make myself feel better"; α = .89), and lack of emotional clarity (DERS/LEC; five items, e.g.: "I have no idea how I am feeling"; α = 86). Participants were asked to indicate how often the items applied to themselves, with responses ranging from 1 (*almost never*) to 5 (*almost always*).

To reduce the number of measures, we again performed an exploratory factor analysis, using the principal axis factoring estimation method and an oblimin rotation. The parallel analysis indicated the presence of two factors. The first factor was saturated by the DERS/DEGDB (0.83), DERS/ICD (0.79), DERS/LAERS (0.79), and DERS/NER (0.66) subscales, and was therefore labeled "out-of-control emotionality" (DERS/OCE; see Zelkowitz & Cole, 2016). The second factor was instead saturated by the DERS/LEC (0.69) and DERS/LEA (0.42) subscales, and was therefore labeled "emotional confusion" (DERS/EC).

Emotion regulation strategies. The Emotion Regulation Questionnaire (ERQ; Gross & John, 2003; Italian version by Balzarotti et al., 2010) is a 10-item questionnaire assessing individual differences in the use of emotion regulation strategies. It consists of two subscales: a cognitive reappraisal (ERQ/CR; six items, e.g.: "When I want to feel less negative emotion, I change the way I'm thinking about the situation"; α = .76) and expressive suppression (ERQ/ES; four items, e.g.; "I control my emotions by not expressing them"; α = .72). Participants indicated their agreement with each item on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Depression. The Beck Depression Inventory II (BDI-II; Beck et al., 1996; Italian version by Sica & Ghisi, 2007) has been widely used to assess the intensity of depression in both clinical and normal populations. It is composed of 21 items evaluating a variety of symptoms and attitudes commonly reported by

clinically depressed individuals. Respondents rated each item on a 4-point Likert scale ranging from 0 (*absence of symptoms*) to 3 (*symptoms of intense level*), according to the severity of the symptoms experienced during the past two weeks. The scores of all items were linearly summed to create a composite index (BDI/DEPR; range: 0-63). In the present study, Cronbach's α was .91.

Procedure

The survey was prepared using Google forms. Two links (one for fourth-year students, the other for fifth-year students) were provided to potential participants during a collective session held at their school, in which the researchers briefly explained the aims of the study. All responses were collected in the period between November and December 2022. Each participant signed an informed consent, and the study was approved by the Ethical Committee of the Free University Maria Santissima Assunta, Roma, Italy (Protocol n. 3/2023).

RESULTS

Gender and School Year Differences

We performed preliminary analyses to assess potential differences related to gender and school year (see Table 1 for descriptive statistics). For the BWESQ and DERS, we used the standardized scores resulting from the exploratory factor analyses. The ERQ/CR, ERQ/ES, and BDI/DEPR scores were likewise standardized, to have all variables measured on the same scale (descriptive statistics for the raw variables are reported in the Appendix, Table A1).

TABLE 1
Means and standard deviations for all measures, as a function of gender and school year

Measures	Boys	Girls	4th year	5th year
PBWE	−0.22 (0.90)	0.18 (0.96)	−0.07 (0.88)	0.07 (1.02)
NBWE	−0.21 (0.83)	0.17 (0.97)	0.01 (0.99)	−0.01 (0.87)
DERS/OCE	−0.22 (0.87)	0.18 (0.91)	−0.07 (0.94)	0.07 (0.92)
DERS/EC	−0.19 (0.81)	0.15 (0.80)	0.05 (0.81)	−0.05 (0.84)
ERQ/CR	−0.01 (1.01)	0.01 (0.99)	−0.01 (1.02)	0.01 (0.97)
ERQ/ES	0.05 (0.94)	−0.04 (1.04)	0.09 (1.00)	−0.09 (0.98)
BDI/DEPR	−0.26 (0.86)	0.21 (1.05)	−0.03 (0.98)	0.04 (1.01)

Note. BW = binge-watching; PBWE = positive BW experience; NBWE = negative BW experience; DERS = Difficulties in Emotion Regulation Scale; DERS/OCE = DERS/out-of-control emotionality; DERS/EC = DERS/emotional confusion; ERQ = Emotion Regulation Questionnaire; ERQ/CR = ERQ/cognitive reappraisal; ERQ/ES = ERQ/expressive suppression; BDI = Beck Depression Inventory; BDI/DEPR = BDI/depression.

Correlational Analyses

Pearson's correlations between all variables are illustrated in Table 2 (correlations between the raw original variables are reported in the Appendix, Table A2). Overall, the results were consistent with our

expectations, because both the PWBE and NBWE dimensions were positively associated with the DERS/OCE, DERS/EC, ERQ/ES, and BDI/DEPR measures. Thus, participants who experienced more out-of-control emotions were more confused about their emotions, used expressive suppression to a greater extent, and had higher levels of depression; were also more likely to engage in both positive and negative BW behaviors. In addition, the use of cognitive reappraisal (ERQ/CR) was positively associated only with the PBWE dimension, suggesting that the use of this strategy increased the likelihood of having positive BW experiences.

TABLE 2
Correlations between all measures ($p < .05$)

	1	2	3	4	5	6
1. PBWE	1.00					
2. NBWE	**0.79**	1.00				
3. DERS/OCE	**0.21**	**0.25**	1.00			
4. DERS/EC	**0.17**	**0.26**	**0.39**	1.00		
5. ERQ/CR	**0.16**	0.09	−0.03	−0.08	1.00	
6. ERQ/ES	**0.12**	**0.16**	**0.19**	**0.33**	0.02	1.00
7. BDI/DEPR	**0.18**	**0.23**	**0.62**	**0.52**	**−0.15**	**0.27**

Note. BW = binge-watching; PBWE = positive BW experience; NBWE = negative BW experience; DERS = Difficulties in Emotion Regulation Scale; DERS/OCE = DERS/out-of-control emotionality; DERS/EC = DERS/emotional confusion; ERQ = Emotion Regulation Questionnaire; ERQ/CR = ERQ/cognitive reappraisal; ERQ/ES = ERQ/expressive suppression; BDI = Beck Depression Inventory; BDI/DEPR = BDI/depression. Numbers in bold indicate significant correlations.

Also, as expected, the BDI/DEPR scores were positively and significantly associated with the DERS/OCE, DERS/EC, and ERQ/ES measures, but negatively associated with ERQ/CR, indicating that participants who had high levels of depression were less able to control their emotions, had less emotional clarity, and were more likely to use expressive suppression (but less likely to use cognitive reappraisal).

Path Analyses

To determine which variables predicted BW engagement, and whether the effects of gender on BW were mediated by differences in emotion regulation or depression, we performed a path analysis, considering gender as the exogenous variable, the DERS/OCE, DERS/EC, ERQ/CR, ERQ/ES, and BDI/DEPR subscales as the endogenous mediators, and the PBWE and NBWE subscales as the output (endogenous) measures. The final model, which included the correlation between the two output variables, as well as seven covariances between the endogenous mediators, showed a very good fit to the data — $\chi^2(3) = 4.37$, $p = .223$; CFI = .99; TLI = .98; RMSEA = .04, 95% CI [.000, .106]. Figure 1 shows the significant paths. As can be noted, the PBWE dimension was positively and significantly predicted by gender ($z = 2.92$, $p = .003$) and the ERQ/CR subscale ($z = 3.34$, $p < .001$), and marginally predicted by the DERS/OCE subscale ($z = 1.74$, $p = .081$). The NBWE, on the other hand, was positively and significantly predicted by gender ($z = 2.69$, $p = .007$) and the DERS/OCE ($z = 2.07$, $p = .038$), DERS/EC ($z = 2.28$, $p = .022$), and ERQ/CR ($z = 2.17$, $p = .030$) subscales. In addition, the analysis of the indirect paths revealed that the effect of gender on the NBWE

dimension was significantly mediated by the DERS/EC subscale ($z = 1.97$, $p = .048$) and marginally mediated by the DERS/OCE subscale ($z = 1.83$, $p = .066$).

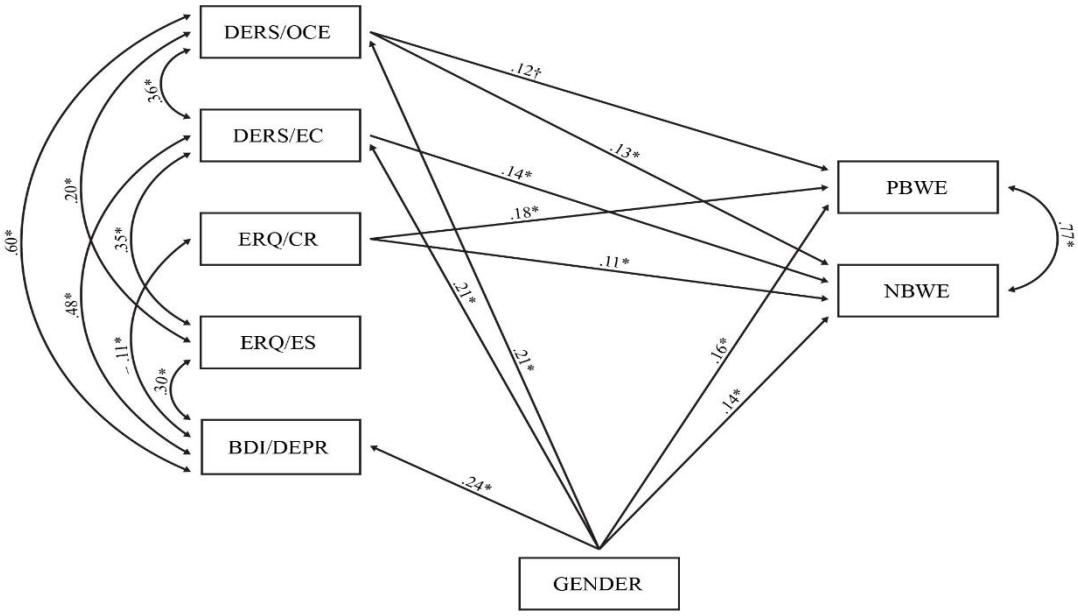

FIGURE 1
Model of path analysis
Numbers represent standardized regression (β) coefficients

Note. BW = binge-watching; PBWE = positive BW experience; NBWE = negative BW experience; DERS = Difficulties in Emotion Regulation Scale; DERS/OCE = DERS/out-of-control emotionality; DERS/EC = DERS/emotional confusion; ERQ = Emotion Regulation Questionnaire; ERQ/CR = ERQ/cognitive reappraisal; ERQ/ES = ERQ/expressive suppression; BDI = Beck Depression Inventory; BDI/DEPR = BDI/depression.
*$p \leq .05$; † = $.05 < p < .10$.

DISCUSSION

The present study investigated the association between BW engagement and symptoms, difficulties in emotion regulation, use of emotion regulation strategies, and depression in a sample of Italian young adults between 16 and 20 years of age. Several interesting findings emerged. First, we found significant gender differences, with female students being more engaged in BW behaviors, being less able to understand and control their emotions, and being more depressed than male students. Second, the correlational analyses confirmed our theoretical expectations, showing that both positive and negative BW experiences were associated with difficulties in regulating and understanding emotions, with high depression feelings, and with the use of expressive suppression. Third, the path analyses suggested that both positive and negative BW experiences were predicted by gender and cognitive reappraisal, while the predictive effects of out-of-control emotionality and emotional confusion were stronger on the NBWE dimension. Finally, evidence indicated that the effects of gender on negative BW experiences were partially mediated by difficulties in the control and comprehension of emotions.

As discussed in the introduction, the role of gender has been highlighted in previous studies (Flayelle, Castro-Calvo, et al., 2020; Steins-Loeber et al., 2020) and the literature indicates that gender may influence the type of and risk for addictions. Charzyńska et al. (2021), for instance, showed that males had higher levels of gaming and pornography addictions, whereas females had higher levels of study, Facebook, shopping, and food

addictions. The higher involvement of females in BW is consistent with the social beliefs that individuals of the two genders prefer different types of activities for entertainment purposes and that women watch TV series more often than men. In agreement, Starosta et al. (2019) reported relevant gender differences in the motivations to perform BW behaviors, such that women were more likely than men to watch TV series to feel positive emotions, to cope with loneliness, or to establish social contacts and share their experiences with friends. Importantly, our results advance these conclusions, by showing that the effects of gender on BW engagement are both direct and indirect, being especially mediated by emotional confusion. That is, women reported lower levels of emotional clarity and awareness than men, and these differences predisposed them to a higher involvement in negative BW experiences. From a preventive perspective, this evidence suggests that women who watch TV series to cope with emotions they do not understand may be particularly prone to develop loss of control over BW behaviors and dependency.

The present study replicated and extended to young adults the observation that subjective difficulties in emotion regulation are significantly related to BW. Specifically, Starosta, Izydorczyk, Sitnik-Warchulska, et al. (2021) found that three subscales of the DERS (impulse control difficulties, limited access to emotion regulation strategies, and lack of emotional clarity) emerged as key factors in predicting problematic BW and the number of episodes watched in one BW session. Along the same line, in our study negative BW experiences were significantly predicted by out-of-control emotionality (a factor which was highly saturated by the impulse control difficulties and limited access to emotion regulation strategies subscales of the DERS) and emotional confusion (a factor which was highly saturated by the lack of emotional clarity subscale of the DERS). More generally, our data are consistent with the predictions of the I-PACE model (Brand et al., 2019), according to which adolescents might feel the urgency to engage in BW and similar addictive behaviors in reaction to internal negative emotions they are unable to accept and cope with. Analogous conclusions have been indeed reached in relation to a wide range of substance and behavioral addictions (e.g., Estévez et al., 2017).

A novel aspect of this study was the examination of the role of two specific emotion regulation strategies — expressive suppression and cognitive reappraisal. As expected, the use of expressive suppression was positively correlated with both positive and negative BW experiences (although it had no significant predictive role in the following path analysis). In the literature, expressive suppression has been generally characterized as a maladaptive strategy of emotion regulation, because it tends to be linked to greater levels of negative affect and depressive symptoms (Larsen et al., 2013). An overreliance upon expressive suppression may represent a risk factor for a wide variety of addictive behaviors, including binge eating and binge drinking (Laghi et al., 2018). More surprising are the results on cognitive reappraisal. This strategy is commonly considered to be adaptive for adolescents' well-being, given its associations with greater positive affect, better relationship closeness, and less frequent health-risk behaviors (Laghi et al., 2021). We, therefore, expected to observe negative relations between the use of cognitive reappraisal and the levels of BW engagement. In contrast, the results indicated that a more frequent reliance upon cognitive reappraisal strategies predicted higher (not lower) involvement in both positive and negative BW experiences. A potential explanation is that, at least for young adults, the frequency of BW might depend on the ability to reinterpret this behavior as a healthy, socially accepted way to experience positive feelings and deal with boredom and loneliness, rather than as an addictive, harmful habit. This hypothesis is supported by the fact that cognitive reappraisal was significantly associated with positive, but not negative, BW experiences; furthermore, the predictive path between cognitive reappraisal and positive BW experiences was numerically stronger than that between cognitive reappraisal and negative BW experiences, suggesting that participants who used cognitive reappraisal to a higher degree were also more likely to experience joy, enthusiasm, and excitement when viewing TV series.

Another element of divergence with previous research concerns the role of depression symptoms. As illustrated in the introduction, positive correlations between BW and depression have been observed by several authors (e.g., Flayelle, Castro-Calvo, et al., 2020; Steins-Loeber et al., 2020). Similar associations emerged in our study; however, depression did not predict either positive or negative BW experiences in the subsequent path analysis. Several reasons may be advanced for explaining the discrepancy. First, the samples used in previous studies might have been characterized by a higher frequency of problematic BW experiences (Starosta, Izydorczyk, & Wontorczyk, 2021). Perhaps, the link between depression and BW might be stronger in participants who have already developed a pathological use of TV series. Alternatively, the association between depression and BW might be driven by a common deficit in the use of emotion regulation strategies. Thus, the inclusion of the DERS and ERQ measures in our study might have prevented us from observing the significant impact of depression symptoms. This explanation is supported by the fact that, in our dataset, depression scores were strongly correlated with out-of-control emotionality and emotional confusion; furthermore, replicating previous research (Joormann & Stanton, 2016; Schäfer et al., 2017), we found that higher levels of depression were associated with more frequent use of expressive suppression, but lower use of cognitive reappraisal.

The present study has several limitations, which must be acknowledged. First, we used a correlational approach, meaning that our conclusions cannot be used to prove the existence of a causal link between emotion regulation, depression, and BW. Second, we used standardized self-report questionnaires to measure BW engagement and symptoms and thus our results cannot be directly compared with those of previous studies that used different measures (i.e., the frequency of BW sessions and/or the number of episodes in one BW session; Starosta, Izydorczyk, Sitnik-Warchulska, et al., 2021; Starosta, Izydorczyk, & Wontorczyk, 2021; Steins-Loeber et al., 2020). Third, our sample was not fully representative of the adolescence period, given that we only included participants attending the fourth and fifth years of an Italian high school. Such a decision was motivated by the expectation that the use of streaming platforms might have been infrequent in younger adolescents. However, because recent estimates indicate that adolescents between 14 and 18 years of age are increasingly likely to watch TV series (Özkent & Açıkel, 2022; Panda & Pandey, 2017), additional research is needed to determine whether the present findings can be generalized to younger participants.

Despite these limitations, our data extend to young adults previous evidence showing that BW is closely associated with difficulties in the use of emotion regulation strategies and highlight for the first time the critical role of cognitive reappraisal. We believe that these findings reflect the coexistence of different aspects of BW, with the difficulties in emotion regulation tapping primarily problematic behaviors and the use of cognitive reappraisal tapping the more recreative, healthy use of TV series. In addition, it also emerged that females may be at higher risk of developing addictive BW behaviors and should be therefore monitored more closely in future studies.

Note

1. The Italian program includes five years of high school.

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Appendix

Table A1
Means and standard deviations for the raw BWESQ, DERS, and BDI measures as a function of gender and school year

Measures	Total	Boys	Girls	4th year	5th year
BWESQ/LC	1.42 (0.48)	1.31 (0.42)	1.50 (0.51)	1.43 (0.53)	1.40 (0.43)
BWESQ/ENG	1.68 (0.55)	1.57 (0.50)	1.76 (0.57)	1.65 (0.52)	1.71 (0.57)
BWESQ/DP	1.39 (0.42)	1.29 (0.36)	1.47 (0.45)	1.39 (0.42)	1.39 (0.42)
BWESQ/DS	2.22 (0.73)	2.04 (0.72)	2.37 (0.71)	2.18 (0.70)	2.27 (0.76)
BWESQ/PEM	2.01 (0.66)	1.87 (0.62)	2.14 (0.66)	1.93 (0.60)	2.11 (0.70)
BWESQ/BW	1.64 (0.53)	1.54 (0.50)	1.71 (0.55)	1.64 (0.55)	1.63 (0.52)
BWESQ/PLP	1.98 (0.79)	1.97 (0.84)	1.98 (0.75)	1.90 (0.74)	2.05 (0.83)
DERS/NER	2.49 (1.00)	2.20 (0.83)	2.73 (1.06)	2.38 (0.99)	2.61 (1.00)
DERS/DEGDB	3.23 (0.94)	3.06 (0.88)	3.36 (0.98)	3.17 (0.95)	3.29 (0.93)
DERS/ICD	2.51 (0.96)	2.41 (0.92)	2.60 (0.99)	2.48 (0.94)	2.55 (0.99)
DERS/LEA	2.60 (0.75)	2.53 (0.70)	2.66 (0.78)	2.75 (0.74)	2.45 (0.74)
DERS/LAERS	2.56 (0.94)	2.34 (0.87)	2.73 (0.96)	2.50 (0.93)	2.63 (0.95)
DERS/LEC	2.57 (0.94)	2.34 (0.94)	2.76 (0.91)	2.62 (0.96)	2.53 (0.93)
ERQ/ES	3.04 (0.85)	3.09 (0.81)	3.00 (0.89)	3.12 (0.86)	2.96 (0.84)
ERQ/CR	3.41 (0.66)	3.40 (0.66)	3.42 (0.65)	3.40 (0.67)	3.41 (0.64)
BDI/DEPR	13.06 (10.46)	10.24 (9.02)	15.30 (10.99)	12.66 (10.33)	13.49 (10.61)

Note. BWESQ = Binge-Watching Engagement and Symptoms Questionnaire; BWESQ/LC = BWESQ/loss of control; BWESQ/ENG = BWESQ/engagement; BWESQ/DP = BWESQ/dependency; BWESQ/DS = BWESQ/desire-savoring; BWESQ/PEM = BWESQ/positive emotions; BWESQ/BW = BWESQ/binge-watching; BWESQ/PLP = BWESQ/pleasure preservation; DERS = Difficulties in Emotion Regulation Scale; DERS/NER = DERS/nonacceptance of emotional responses; DERS/DEGDB = DERS/difficulties engaging in goal-directed behavior; DERS/ICD = DERS/impulse control difficulties; DERS/LEA = DERS/lack of emotional awareness; DERS/LAERS = DERS/limited access to emotion regulation strategies; DERS/LEC = DERS/lack of emotional clarity; ERQ = Emotion Regulation Questionnaire; ERQ/ES = ERQ/expressive suppression; ERQ/CR = ERQ/cognitive reappraisal; BDI = Beck Depression Inventory; BDI/DEPR = BDI/depression.

TABLE A2
Correlations between the raw measures ($p < .05$)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. BWESQ/LC	1.00															
2. BWESQ/ENG	**0.58**	1.00														
3. BWESQ/DP	**0.67**	**0.60**	1.00													
4. BWESQ/DS	**0.48**	**0.73**	**0.56**	1.00												
5. BWESQ/PEM	**0.51**	**0.73**	**0.60**	**0.72**	1.00											
6. BWESQ/BW	**0.70**	**0.69**	**0.70**	**0.68**	**0.69**	1.00										
7. BWESQ/PLP	**0.34**	**0.55**	**0.50**	**0.59**	**0.52**	**0.52**	1.00									
8. DERS/NER	**0.30**	**0.15**	**0.22**	**0.20**	**0.25**	**0.24**	**0.15**	1.00								
9. DERS/DEGDB	0.10	−0.01	**0.13**	0.08	**0.12**	**0.12**	**0.13**	**0.49**	1.00							
10. DERS/ICD	**0.13**	0.04	**0.15**	0.09	**0.12**	**0.14**	0.06	**0.52**	**0.64**	1.00						
11 DERS/LEA	**0.15**	−0.01	−0.01	0.01	−0.09	0.02	−0.08	0.07	−0.04	0.06	1.00					
12. DERS/LAERS	**0.25**	**0.16**	**0.23**	**0.21**	**0.23**	**0.26**	**0.18**	**0.69**	**0.60**	**0.64**	**0.13**	1.00				
13. DERS/LEC	**0.28**	**0.12**	**0.15**	**0.16**	**0.16**	**0.19**	0.04	**0.50**	**0.29**	**0.33**	**0.31**	**0.53**	1.00			
14. ERQ/ES	**0.17**	**0.11**	0.10	0.09	**0.11**	**0.13**	0.06	**0.18**	0.08	0.04	**0.22**	**0.26**	**0.29**	1.00		
15. ERQ/CR	0.03	**0.11**	0.08	**0.12**	**0.22**	**0.15**	0.08	0.07	−0.01	−0.04	**−0.34**	−0.10	−0.02	0.02	1.00	
16. BDI/DEPR	**0.23**	**0.12**	**0.16**	**0.18**	**0.16**	**0.19**	0.09	**0.53**	**0.40**	**0.46**	**0.37**	**0.66**	**0.50**	**0.27**	**−0.15**	1.00

Note. BWESQ = Binge-Watching Engagement and Symptoms Questionnaire; BWESQ/LC = BWESQ/loss of control; BWESQ/ENG = BWESQ/engagement; BWESQ/DP = BWESQ/dependency; BWESQ/DS = BWESQ/desire-savoring; BWESQ/PEM = BWESQ/positive emotions; BWESQ/BW = BWESQ/binge-watching; BWESQ/PLP = BWESQ/pleasure preservation; DERS = Difficulties in Emotion Regulation Scale; DERS/NER = DERS/nonacceptance of emotional responses; DERS/DEGDB = DERS/difficulties engaging in goal-directed behavior; DERS/ICD = DERS/impulse control difficulties; DERS/LEA = DERS/lack of emotional awareness; DERS/LAERS = DERS/limited access to emotion regulation strategies; DERS/LEC = DERS/lack of emotional clarity; ERQ = Emotion Regulation Questionnaire; ERQ/ES = ERQ/expressive suppression; ERQ/CR = ERQ/cognitive reappraisal; BDI = Beck Depression Inventory; BDI/DEPR = BDI/depression. Numbers in bold indicate significant correlations.