

## **News Exposure and Psychological Adjustment: Examining the Emotional Effects and Correlates of Short and Long-Term Exposure to Soft and Hard News**

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### Abstract

Past research has shown that news media may contain a disproportionate amount of negative news. Frequent exposure to such negative information could have detrimental effects on our mental well-being. We aimed to gain further insight into the potentially adverse effects of exposure to soft and hard news, as well as to examine potential reasons why individuals might expose themselves to such negative information. To do so, we conducted an online survey involving 176 participants (66 male, 107 female and 3 other) aged 15–65 years. The study included manipulation and additional (correlational) analyses. In the manipulation, we tested for the potential short-term effects of exposure to soft or hard news on the psychological well-being of our participants (as measured by the semi-projective Rotter Incomplete Sentences Blank; Rotter, 1950). This was done by setting three conditions (soft news, hard news and control group) wherein participants were exposed to 15 consecutive front page screenshots of the chosen soft and hard newspapers respectively. Hard news is generally more focused on major issues and breaking events – i.e., news that is important for the individual to understand, while soft news usually focuses on personal stories, is less time-bound, and is more incident-based. The correlational part of our study focused on discovering associations between long-term exposure to (different types of) news and the degree of negative emotions and well-being (measured by the DASS-21, Lovibond & Lovibond, 1995) and Rosenberg Self Esteem Scale (Rosenberg, 1965). The results did not show statistically significant differences between conditions. When comparing the long-term readers of the chosen hard and soft newspapers, statistically significant differences were found only in anxiety levels, however, a forming trend seemed to suggest that long-term exposure to soft news might be associated with reduced psychological well-being. Our findings are discussed in line with the contemporary psychological literature.

*Keywords:* hard news, soft news, sensationalism, mental health, schadenfreude

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## Introduction

There is a common truth about a disproportionate presence of negative news broadcasting compared to positive news in the public sphere, and current studies support it (Damstra & Boukes, 2018; De Smedt et al., 2011; Soroka, 2012). Studies have shown that a large share of news is focused on negative topics, causing negativity in news to be increasingly difficult to avoid (Johnson, 1996; Patterson, 2000; Unz et al., 2008). Consequently, following daily news practically implies exposure to negative information (Lengauer et al., 2012). This phenomenon has the potential to shape people's views and paint our understanding of the world to be more dark, negative, and bleak than it actually is (Altheide, 2002). Indeed, there is sufficient evidence that overexposure to negative news can have adverse effects on an individual's well-being (for a review, see Walsh-Childers & Brown, 2009). While following news is no doubt essential for the healthy functioning in a society, it would seem that often the price we pay for following different news broadcasts have detrimental effects on our general well-being (Balzarotti & Ciceri, 2014; Marin et al., 2012; McIntyre & Gibson, 2016).

In recent years, there has been an increase in the amount of what is known as soft news compared to hard news (Reinemann et al., 2012). Even though it is sometimes difficult to separate the two (e.g., Lehman-Wilzig & Seletzky, 2010), previous literature offers valuable insight into how they can be distinguished. Early distinctions between hard and soft news (Schramm, 1949) hypothesized the main difference in the type of reward, with soft news generally leading to immediate rewards, while hard news normally leads to delayed rewards. More recent definitions define hard news as being more focused on major issues and breaking events – i.e., news that is important for the individual to understand. Contrarily, soft news usually focuses on personal stories, is less-time bound, and more incident-based (Patterson, 2000).

Because the general public has become fragmented in terms of where they get their information (owing also to the rise of social media), traditional news readership and viewership have decreased (Blumler & Kavanagh, 1999; Ha et al., 2018; Webster & Ksiazek, 2012). In their attempt to retain their user base, media outlets are becoming increasingly focused on making the products more attractive to the general public (Gans, 2009; Williams & Carpini, 2011). A consequence of this is that news has become more focused on reporting dramatic, emotionally gripping themes, with a personalized narrative (Vettehen et al., 2010).

As such, researchers have found that media, especially media with higher amounts of soft news content, often focuses on the presentation of real-life misfortunes as entertainment (Watts, 2008). Not only is this kind of news very prevalent, but past research has also found that individuals are more inclined to browse media that covers topics involving disaster and misfortune as opposed to news with informative and less emotional themes (Zillmann et al., 2001). Exposure

to such negative media has been shown to have various adverse effects on psychological and mental well-being (Walsh-Childers & Brown, 2009). Reporting on suicide has been attributed to higher suicide rates (Niederkrotenthaler et al., 2012). Exposure to stressful footage involving highly violent and tragic events such as mass violence and natural disasters has been found to trigger symptoms of post-traumatic stress disorder (Ben-Zur et al., 2012; Goodwin et al., 2013), functional impairments (Thompson et al., 2017), more severe depressive symptoms (Ahern et al., 2002), and higher rates of physical and mental illnesses (Silver et al., 2013). Past studies have found six common themes found in soft news - sex, violence, destruction, humour, celebrities, and other emotional news (Grabe et al., 2001; Vettehen et al., 2005). Among these, violence seems to be the most emotionally gripping (Van Der Molen et al., 2002).

The field of trauma exposure similarly states that direct exposure to human tragedy and experiencing indirect trauma through news exposure increases the likelihood of anxiety disorders, depressive disorders, and post-traumatic stress disorder (Ahern et al., 2004). Furthermore, cumulative exposure to traumatic and tragic stories may change an individual's social expectations and - with enough repetition and extended use - this can alter one's way of looking at life, for example, as perceiving the world to be more threatening than it actually is (Altheide, 2002). Individuals may become more afraid of the outside world due to reports on (for example) terrorist attacks (Marshall et al., 2007), virus pandemics (Van den Bulck & Custers, 2009), aeroplane crashes (Unz et al., 2008). Thus, these changes might have broader consequences on how individuals behave and feel in society, specifically, for example, how safe they feel and how trusting they are of others (Keller et al., 2006; Miller & Leshner, 2007).

There is a lack of research investigating the differential effects of soft vs. hard news on the psychological well-being of exposed individuals and the specific mechanisms at play. While there have been explanations proposed as to why exposure to news can have detrimental effects – one popular explanation lies in appraisal theory (de Hoog & Verboon, 2020) and another in neurology (Wormwood et al., 2018) – there are very few studies that focus on the respective adverse effects of soft and hard news (see Boukes & Vliegthart, 2017). Among these explanations, appraisal theory has been most popular in the field of news research.

According to appraisal theory, negative news can be perceived as a stressor that should be appraised and reacted to. According to authors in the field of appraisal theory (Ellsworth & Scherer, 2003; Lazarus & Folkman, 1984), when an individual is exposed to a stressor, the stressor is appraised to cause an emotional reaction that, in turn, allows him to react optimally to the given situation. The process of appraisal is thought to occur in two stages. Firstly, the individual assesses the stressor by its severity and relevance, and secondly they assess their own ability to combat the stressor (Lazarus & Folkman, 1984). When an individual is faced with a stressor, they first evaluate the valence and severity of the stressor (e.g., negative and very

threatening) as well as the degree to which the stressor is relevant to them. Additionally, the individual evaluates whether the situation is something he has any influence over. More contemporary theories of appraisal have also suggested the importance of the specific relevance of the given situation or information to the individual (Balzarotti & Cicero, 2014; De Hoog, 2013). More specifically, studies on the appraisal of media news have shown that the relevance of the news to one's circumstances is the factor that most strongly impacts the valence and reaction to the news stressor (Balzarotti & Cicero, 2014; Marshall et al., 2007). Individual personality differences have also been found to be important factors associated with appraisal (Gross & John, 2003; Valkenburg & Peter, 2013). We believe, therefore, that the potential negative effects of news exposure could in part be explained by appraisal theory.

Along with examining the potential psychological effects of news exposure, we are also interested in uncovering potential motives for exposure to news, especially sensationalistic news. A motive for following news media that might be especially relevant for our study is *schadenfreude* - pleasure at the misfortune of others (Aspinwall & Taylor, 1993; Gibbons, 1986; Gibbons & McCoy, 1991). *Schadenfreude* is a discordant emotional reaction (Heider, 1958) and is closely related to the process of social comparison (Brambilla & Riva, 2017). As such, we believe the graphic news found in sensationalistic newspapers might offer readers an opportunity to elevate their self-esteem temporarily. Several authors have stated that the desire for positive self-esteem might be among the most important of human drives (Allport, 1937; Baumeister, 1991, 1994; Sherman & Cohen, 2006). According to Allport (1937), humans most strongly yearn for the experience of elevated self-esteem, and, similarly, contemporary psychologists believe that, in its various forms, the need for a sense of self-worth is one of the fundamental sources of meaning in our lives (Baumeister, 1994; Sherman & Cohen, 2006). A potential way for individuals with chronically low self-esteem to temporarily boost their self-concept is to compare themselves to those who are in a relatively worse position than themselves (Collins, 1996). Past research has shown that individuals with lower self-esteem are more likely to self-evaluate and self-elevate by comparing themselves to people with a worse lot in life. Motivation for self-elevation is especially present when one experiences a threat to one's self-esteem (Aspinwall & Taylor, 1993; Gibbons & McCoy, 1991). We, therefore, hypothesized that individuals who experience higher levels of negative affect and lower levels of self-esteem would be more motivated to follow soft news, as frequently featured negative news could serve as an opportunity to temporarily elevate one's self-concept.

Taken altogether we aimed to examine the potentially negative effects of news exposure on well-being. We attempted to compare the possible adverse psychological effects between soft and hard news. In line with the presented theoretical background, we assumed that individuals who report more frequently following newspapers, television news and online news will exhibit lower indicators

of well-being (operationalized in our study as lower self-esteem and higher levels of depression, anxiety, and stress). We hypothesized that soft news, due to its focus on tragic events and sensationalism, would have more negative consequences on general well-being. We also hypothesized that being directly exposed to soft news would have a more negative effect on our participants' mood as assessed by a semi-structured projective technique – The Rotter Incomplete Sentences Blank (Rotter, 1950). Due to the potential effects of social comparison and *schadenfreude* as a way to boost one's self-esteem by searching for opportunities to compare oneself to those less fortunate, we hypothesized that individuals who more frequently follow soft news in their daily lives (long-term exposure) are more likely to have lower self-esteem and higher levels of depression, anxiety, and stress. Similarly, we hypothesized that regularly following soft newspapers would be associated with lower well-being.

## Method

### Participants

A convenience sample of 176 participants (66 males, 107 females and 3 undeclared), aged 15-65 years ( $M = 26.94$ ,  $SD = 10.17$ ), was recruited through an online survey. The survey was promoted online via social media as well as offline to psychology students at the local university (e.g., during university classes). Most participants had completed high school (54.5%), followed by participants who had finished an undergraduate degree (29.0%), master's degree (9.7%), elementary school (4.0%), and a PhD degree (2.3%).

### Instruments

At the beginning of the survey, participants completed a general demographic questionnaire, which contained questions about their age, gender and formal education level.

The survey also included five questions about the amount of news our participants are exposed to in their daily lives (*Frequency of news exposure*). Questions included were: "How often do you read newspaper magazines?", "How often do you watch the news on the television?", "How often do you browse newspaper websites?", "How much time do you spend exposed to media daily?", and "Which news platform do you typically follow?" Answers were assessed on a 6-point scale with answers ranging from 1-6 (1 – *several times a day*, 2 – *once a day*, 3 – *more than three times a week*, 4 – *two or three times a week*, 5 – *once a week*, 6 – *less than once a week*). The question on general exposure to news ("How much time are you exposed to news a day?") was measured on a 5- point scale (1 – *more than*

2 hours, 2 – more than 1 hour, 3 – between 30 minutes and 1 hour, 4 – between 15-30 minutes, 5 – less than 15 minutes).

*DASS-21* (Lovibond & Lovibond, 1995) is a clinical measure that measures three related states – depression, anxiety, and stress. Each of the subscales consists of 7 questions. The answering format is a 4-point Likert-type scale. Answers range from 1 – *did not apply to me at all* to 3 – *applied to me very much, or most of the time*. The participants are asked how often they have felt a specific state in the past week, for example - “*I couldn’t seem to experience any positive feeling at all*” (depression), “*I was worried about situations in which I might panic and make a fool of myself*” (anxiety), “*I found it difficult to relax*” (stress). *DASS-21* consists of 21 questions and takes about 3 minutes to finish. In our sample the Cronbach alphas for the three dimensions were:  $\alpha = .90$  for stress,  $\alpha = .83$  for anxiety, and  $\alpha = .88$  for depression.

*Rosenberg Self-Esteem Scale* (Rosenberg, 1965) is a scale consisting of ten questions that measure general self-esteem by measuring positive and negative attitudes towards the self. The scale is one dimensional. The participants answer using a 5-point Likert type scale. Answers range from 1 – *strongly disagree* to 5 – *strongly agree*. Half of the questions are reverse coded. A high score represents positive self-esteem. It consists of items such as “*On the whole, I am satisfied with myself*”, “*I feel that I have a number of good qualities*”, “*I feel I do not have much to be proud of*”. The internal consistency ( $\alpha$ ) of our sample was .91.

*Affective, Behavioural, Cognitive Reactions to News Scale*. For the purposes of the present study, we created a scale of cognitive (e.g., “*After reading/watching news, I ruminate about their content*”;  $\alpha = .85$ ), affective (e.g., “*After reading/watching news, I feel more stressed out*”;  $\alpha = .63$ ) and behavioural responses to news (e.g., “*After reading/watching news, I talk about their content with my friends*”,  $\alpha = .41$ ). Each scale consisted of three items answered with a 5-point agreement scale (1 – *completely disagree*, 5 – *completely agree*). The purpose of this scale was to examine the possible ways participants react to news on the cognitive, affective, and behavioural level. The specific three items for each of the scales were selected from a larger pool of items that the researchers of this study deemed as the most likely types of responding to news exposure on each respective level based on content analysis. We chose cognitive, affective, and behavioural ways of reacting to stimuli based on the ABC model in Cognitive-Behavioural Therapy (Ellis, 1973), which highlights the three levels as crucial to human mental health. The behavioural scale was excluded from further analysis due to its low internal consistency (.41). We examined the model structure of the cognitive and affective items using confirmatory factor analysis. Our results suggest good fit for the cognitive and affective scale – RMSEA = 0.057, SRMR = 0.031, CFI = 0.988, TLI = 0.977.

*The Rotter Incomplete Sentences Blank* (Rotter, 1950) is a semi-structured projective test. The original version consists of 40 sentences beginning with a word or set of words that the participant must complete, for example, “*I suffer \_\_\_\_\_*”. The

ways respondents finish the sentence give a more in-depth insight into their well-being and emotional state. Answers are typically coded from 0 to 6, with 0 being the most adaptive and 6 being the most maladaptive score. In the present study, we only used 13 (out of 40) sentences, mainly because some sentences (e.g., “*Sports \_\_\_\_\_*”) are somewhat irrelevant in the context of our study and are highly unlikely to be affected by news exposure. Additionally, we believe that the chosen sentences offer a good enough and time-efficient insight into our non-clinical sample of participants’ emotional state. To get optimal internal consistency between the three raters (the three authors of this paper), we tested the original, 7-point scale and an alternative, 5-point scale. We hypothesized that the potential differences in Rotter scores, between the groups of individuals, in the three conditions, could be best conceptualized as a change in mood that was assessed through the projective responses of our participants. We chose the 5-point scale, since ICC values were better, ranging from .79 to .98, with eleven out of thirteen sentences showing values above .90. Additionally, we believe a 5-point rating scale is more intuitive and more practical for use.

## **Procedure**

The study’s potential participants were sent a link to the online survey that contained all research materials. The participants were asked to complete all test questions. The survey included demographic questions, news consumption habits, the DASS-21 scale (Lovibond & Lovibond, 1995), and Self-Esteem Scale (Rosenberg, 1965). In the recruitment phase, participants were guaranteed anonymity and reminded that their participation in the study was completely voluntary. Completing the survey took about 20 minutes on average. After the study, participants were briefly informed about the study’s purpose and encouraged to ask any questions. Statistical analyses were performed using IBM SPSS Statistics 23.

## **Manipulation**

As we aimed to expose participants to hard/soft news, we prepared screenshots of two Slovenian news websites in this part of our research. The screenshots were taken every day at 3 pm and were gathered for a period of 15 consecutive days. Participants were randomly allocated to one of three conditions. The participants in the first group (Group A) were primed (exposed to front-page screenshots for a duration of 10-20 seconds each) with 15 consecutive screenshots from the website of a soft news magazine. The participants in the second group (Group B) were primed by 15 screenshots from a hard news magazine. The last group (Group C) received no priming and were thus part of the control condition. The participants in groups A and B were exposed to priming before completing the Rotter incomplete sentence blank task.

The specific soft and hard newspapers used in the study are owned by the same company. To the best of our knowledge, Reinemann and colleagues (2012) have put forth the most elaborate distinction between soft and hard news. The distinction is made on three dimensions: 1. politically relevant topics with a focus on societal issues (hard news) versus topics that do not necessarily focus on societal issues or are politically relevant (soft news); 2. focus on society by means of thematic (hard news) versus focus on individuals by means of episodic frames (soft news); and 3. impersonal and unemotional (hard news) vs. personal and emotional style (soft news). Based on these distinctions we believe that our chosen newspapers fit neatly into these respective categorizations. Additionally, the chosen soft newspaper contains features that are characteristic for soft news such as sensationalistic reporting and a focus on themes such as crime, violence, accidents and tragedy (Baum, 2007). The news stories are predominantly personalized and thus not part of a wider societal context (Patterson, 2000). On the other hand, the chosen hard newspapers focus on current events as well as themes that are relevant to the public's everyday life. The style of writing is rational, impersonal and thematically framed – other defining features of hard news reporting (Baum, 2003; Reinemann et al., 2012). While soft news most often includes lighter and positive stories (Lehman-Wilzing & Seletzky, 2010), we would like to point out that an important feature of our chosen soft newspaper is a strong focus on tragic events with a sensationalistic style of reporting.

## Results

Our results section features descriptive statistics, correlational analysis and two ANOVA comparisons - examining differences between groups in the situation of manipulation as well as differences between psychological adjustment (stress, anxiety, depression, and self-esteem) and their associations with soft and hard news reading habits.

Most participants follow newspapers less than once a week (67.0%), while 14.2% read newspapers once a week. The highest proportion of our participants follow TV news less than once a week (44.3%); the next most frequent answer is once a week (21.6%). Of our sample, 34.7% follows online newspapers several times a week (34.7%), while 17.6% follow online news two or three times a week. Participants are exposed to length of news in the following order: 27.8% of participants are exposed between 30 minutes and an hour, 25% from 15 to 30 minutes, 20.5% less than 15 minutes, 18.8% more than one hour, and 8% more than 2 hours. Of our participants, 36.9% reported following the selected hard newspapers beforehand, while 22.7% follow the selected soft newspapers. Descriptive statistics are shown in Tables 1 and 2.



**Table 1**

*Descriptive Statistics for all Included Variables and Normality Distribution Tests*

|                           | <i>N</i> | <i>M</i> | <i>SD</i> | <i>Min</i> | <i>Max</i> | <i>S</i> | <i>K</i> | <i>S-W</i><br>test |
|---------------------------|----------|----------|-----------|------------|------------|----------|----------|--------------------|
| Gender                    | 173      | /        | /         | /          | /          | /        | /        | /                  |
| Age                       | 173      | 26.94    | 10.17     | 15.00      | 65.00      | -0.49    | -1.78    | .80**              |
| Frequency:<br>newspaper   | 176      | 1.74     | 1.32      | 1.00       | 6.00       | 1.92     | 2.79     | .62**              |
| Frequency: TV             | 176      | 2.25     | 1.46      | 1.00       | 6.00       | 1.00     | 0.09     | .80**              |
| Frequency:<br>online news | 176      | 3.90     | 1.91      | 1.00       | 6.00       | -0.23    | -1.49    | .84**              |
| News<br>exposure          | 176      | 2.69     | 1.22      | 1.00       | 5.00       | -0.20    | -0.90    | .91**              |

*Note.* *M* = Mean, *SD* = Standard Deviation, *Min* = Minimum, *Max* = Maximum, *S* = Skewness, *K* = Kurtosis, *S-W* test = Shapiro-Wilk test.

**Table 2**

*Descriptive Statistics for all Included Variables and Normality Distribution Tests (N = 176)*

|                       | <i>k</i> | <i>M</i> | <i>SD</i> | <i>Min</i> | <i>Max</i> | <i>S</i> | <i>K</i> | <i>S-W</i><br>test | Cronbach's<br><i>α</i> |
|-----------------------|----------|----------|-----------|------------|------------|----------|----------|--------------------|------------------------|
| Stress                | 7        | 1.96     | 0.69      | 1.00       | 4.00       | 0.68     | 0.08     | .95**              | .90                    |
| Anxiety               | 7        | 1.58     | 0.56      | 1.00       | 3.71       | 1.32     | 1.64     | .86**              | .83                    |
| Depression            | 7        | 1.62     | 0.64      | 1.00       | 3.71       | 1.26     | 0.94     | .85**              | .88                    |
| Self-esteem           | 10       | 3.71     | 0.89      | 1.60       | 5.00       | -0.51    | -0.64    | .95**              | .91                    |
| Cognitive<br>response | 3        | 2.77     | 0.83      | 1.00       | 5.00       | -0.14    | -0.47    | .98**              | .85                    |
| Affective<br>response | 3        | 2.71     | 1.09      | 1.00       | 5.00       | -0.13    | -1.15    | .94**              | .63                    |
| Mood<br>(Rotter)      | 3        | 2.86     | 0.46      | 1.69       | 4.23       | -0.25    | -0.12    | .99**              | /                      |

*Note.* Gender: 1 = male, 2 = female, *M* = Mean, *SD* = Standard Deviation, *Min* = Minimum, *Max* = Maximum, *k* = Number of items, *S* = Skewness, *K* = Kurtosis, *S-W* test = Shapiro-Wilk test.

**Table 3**  
*Correlations between the Variables*

|                           | 1      | 2      | 3     | 4     | 5    | 6      | 7      | 8      | 9      | 10     | 11     | 12 |
|---------------------------|--------|--------|-------|-------|------|--------|--------|--------|--------|--------|--------|----|
| 1. Gender                 | -      |        |       |       |      |        |        |        |        |        |        |    |
| 2. Frequency: Newspaper   | -.26** | -      |       |       |      |        |        |        |        |        |        |    |
| 3. Frequency: TV          | -.14   | .42**  | -     |       |      |        |        |        |        |        |        |    |
| 4. Frequency: Online news | -.43** | .30**  | .29** | -     |      |        |        |        |        |        |        |    |
| 5. General news exposure  | -.38** | .39**  | .44** | .63** | -    |        |        |        |        |        |        |    |
| 6. Stress                 | .22**  | -.22** | -.13  | -.16* | -.09 | -      |        |        |        |        |        |    |
| 7. Anxiety                | .27**  | -.26** | -.12  | -.14  | -.05 | .77**  | -      |        |        |        |        |    |
| 8. Depression             | -.02   | -.13   | -.10  | .05   | .09  | .66**  | .58**  | -      |        |        |        |    |
| 9. Self-esteem            | -.08   | .14    | .06   | -.01  | -.07 | -.50** | -.48** | -.74** | -      |        |        |    |
| 10. Cognitive response    | .09    | -.07   | -.02  | .02   | .17* | .31**  | .31**  | .27**  | -.32** | -      |        |    |
| 11. Affective response    | .19*   | -.13   | -.05  | -.10  | .07  | .44**  | .39**  | .28**  | -.28** | .76**  | -      |    |
| 12. Mood (Rotter)         | -.05   | .17*   | .14   | .04   | -.05 | -.43** | -.33** | -.57** | .66**  | -.23** | -.21** | -  |

*Note.* Gender: 1 = Male, 2 = Female; \* $p < .05$ , \*\* $p < .01$ .

Due to our sample being normally distributed as suggested by skewness and kurtosis (George & Mallery, 2010), we conducted a Pearson's correlation analysis between all the relevant research variables (and a point-biserial correlation when examining gender differences). The results are shown in Table 3. We would like to highlight that Rotter scores show significant correlations with stress, anxiety, depression, and self-esteem. Due to the Rotter Incomplete Sentences Blank being a measure of general psychological adjustment, we would expect it to be significantly (negatively) related to stress, anxiety, depression, and self-esteem. These results suggest appropriate convergent validity of the instrument.

The correlation results in Table 3 show that exposure to newspapers is significantly (negatively) associated with measures of stress and anxiety. A similar trend appears regarding TV news exposure but without statistically significant associations. A statistically significant negative correlation exists between stress and online news exposure. General news exposure is not significantly associated with any of the DASS-21 variables or the self-esteem scale. The correlation results show that gender is significantly associated with following newspapers, following online news, and general news exposure. More specifically, males on average scored higher on all measures of news exposure. According to the results, women were less likely to follow all the available forms of news, while having higher levels of stress and anxiety on average. Gender was found to be mildly associated with affective responding to news – being female seems to be more strongly related to an affective response to news.

### **The Manipulation: Testing Main Effects**

The participants were randomly distributed into three conditions: 49 participants were assigned to the hard news condition (27.8%), 50 participants in the soft news condition (28.4%), and 77 participants were part of the control group (43.8%). Gender, age, education level, frequency of exposure to newspapers, online and TV news, general news exposure, stress, anxiety, depression, self-esteem, cognitive response, and affective response did not differ significantly between groups. While still not statistically significant, the largest difference between groups was found in affective responding to news ( $F(2,173) = 2.53, p = .082, \eta^2 = .028$ ). In particular, the highest level of general affective responding was noticed in the soft news condition. As such, we decided to analyse the results without covariates (ANOVA) and with affective responding as a covariate (ANCOVA).

Table 4 shows ANOVA and ANCOVA comparisons between the three conditions. Leven's test of homogeneity of variances showed that the homogeneity assumptions were met ( $p = .835$  and  $p = .078$ ). As shown in Table 3 below, we did not find significant differences between the conditions in news priming on mood (as measured with the Rotter test).

**Table 4**

*The Effects of News Priming on Rotter Test Scores*

|               | <i>N</i> | <i>M</i> | <i>SD</i> | One-way ANOVA                                  | One-way ANCOVA <sup>1</sup>                    |
|---------------|----------|----------|-----------|--|--|
| Hard news     | 49       | 2.77     | 0.46      | $F(2, 173) = 1.81,$<br>$p = .17, \eta^2 = .02$ | $F(2, 172) = 2.26,$<br>$p = .11, \eta^2 = .03$ |
| Soft news     | 50       | 2.94     | 0.48      |  |  |
| Control group | 77       | 2.88     | 0.44      |  |  |

Note. <sup>1</sup> Model with one covariate: affective response.

**ANOVA Comparison between Soft and Hard News Reading Habits**

To examine differences between individuals who report following (long-term exposure) the specified hard and soft newspapers (or newspaper websites) used in our study, we performed four separate one way-ANOVA analyses. To conduct the analysis, we compared the measures of stress, anxiety, depression, and self-esteem between readers of the chosen hard news ( $N = 52$ ), readers of chosen soft news ( $N = 27$ ), and readers of none ( $N = 84$ ). The group with readers of both instruments was not included due to the small size of the group ( $N = 13$ ) Leven’s test showed that the assumption of homogeneity of variances was not met when comparing anxiety ( $p = .01$ ), depression ( $p = .02$ ), and self-esteem ( $p = .02$ ), while the assumption was met when comparing stress scores ( $p = .10$ ). We used a Welch test when comparing the groups where homogeneity assumptions were not met. No significant differences between the groups were found in any of the measures except for anxiety (Stress:  $F = 0.87, p = .42$ ; Anxiety:  $F = 3.73, p = .03$ ; Depression:  $F = 2.25, p = .11$ ; Self-esteem:  $F = 1.08, p = .34$ ). We conducted a Games Howell post hoc test to further examine the differences between groups. Results show that the difference was found between readers of the hard news and those who do not follow either of the newspapers ( $p = .03$ ) (Table 5).

**Table 5**

*Comparisons between Hard and Soft Newspaper Reading Habits in Measures of Stress, Anxiety, Depression and Self-Esteem*

|                             | <i>N</i> | <i>M</i> | <i>SD</i> | <i>Min</i> | <i>Max</i> | <i>F</i> | <i>p</i> | $\eta^2$ |
|-----------------------------|----------|----------|-----------|------------|------------|----------|----------|----------|
| <b>Stress</b>               |          |          |           |            |            | 0.87     | .42      | .01      |
| Readers of chosen hard news | 52       | 1.86     | 0.61      | 1.69       | 2.03       |          |          |          |
| Readers of chosen soft news | 27       | 2.03     | 0.69      | 1.76       | 2.30       |          |          |          |
| Readers of none             | 84       | 2.00     | 0.76      | 1.84       | 2.17       |          |          |          |

|                             | <i>N</i> | <i>M</i> | <i>SD</i> | <i>Min</i> | <i>Max</i> | <i>F</i> | <i>p</i> | $\eta^2$ |
|-----------------------------|----------|----------|-----------|------------|------------|----------|----------|----------|
| <b>Anxiety</b>              |          |          |           |            |            | 3.73     | .03*     | .04      |
| Readers of chosen hard news | 52       | 1.43     | 0.41      | 1.31       | 1.54       |          |          |          |
| Readers of chosen soft news | 27       | 1.66     | 0.70      | 1.38       | 1.93       |          |          |          |
| Readers of none             | 84       | 1.65     | 0.61      | 1.52       | 1.79       |          |          |          |
| <b>Depression</b>           |          |          |           |            |            | 2.25     | .11      | .03      |
| Readers of chosen hard news | 52       | 1.49     | 0.56      | 1.33       | 1.65       |          |          |          |
| Readers of chosen soft news | 27       | 1.85     | 0.87      | 1.50       | 2.19       |          |          |          |
| Readers of none             | 84       | 1.65     | 0.60      | 1.51       | 1.78       |          |          |          |
| <b>Self-esteem</b>          |          |          |           |            |            | 1.08     | .34      | .02      |
| Readers of chosen hard news | 52       | 3.77     | 1.00      | 3.50       | 4.05       |          |          |          |
| Readers of chosen soft news | 27       | 3.47     | 0.99      | 3.08       | 3.87       |          |          |          |
| Readers of none             | 84       | 3.77     | 0.78      | 3.60       | 3.94       |          |          |          |

\* $p < .05$ .

## Discussion

The present study consisted of two parts – part with manipulation and a part including inferential statistical analyses. The manipulation part was aimed to examine the potential immediate effects of direct exposure (through priming) to hard and soft news, respectively, on psychological well-being. In line with the findings of previous studies, we also aimed to examine if general, long-term exposure to news is associated with higher levels of depression, anxiety, stress, as well as lower levels of self-esteem. Furthermore, we attempted to examine potential differences in negative affect between participants who, in their daily lives, follow soft and hard news regularly.

In examining associations with the frequency of exposure to TV, online and traditional newspapers news, our results show that, contrary to our expectations, there were no significant negative associations between frequency of everyday news exposure and self-esteem and no significant positive associations with depression, anxiety, and stress. Even more surprisingly, in some cases (e.g. anxiety and newspaper exposure), a significant correlation in the opposite direction was found. These results go against the findings of most previous studies, which have found higher exposure to news to be associated with lower psychological well-being (Balzarotti & Cicero, 2014; Johnston & Davey, 1997; Marin et al., 2012; McIntyre & Gibson, 2016; Szabo & Hopkinson, 2007). Some studies have even shown that

exposure to negative news (which represent a large proportion of news, according to some authors at least 50%; Johnson, 1996) can provoke symptoms of post-traumatic stress disorders (Dougall et al., 2005; Hansen, 2009; Jones & Salathé, 2009; Marshall et al., 2007; Piotrkowski & Brannen, 2002; Van den Bulck & Custers, 2009).

A potential explanation is that participants in our sample possess protective factors that could reduce the effect negative news would otherwise have on them. Previous studies have identified personality traits such as extraversion (Rafienia et al., 2008), sensation seeking, and emotional stability (Kuppens & Tong, 2010). Another potential explanation for our results could be that, in our sample, certain personality traits might be associated with frequenting news media that serve as a mediator in the relationship between news exposure and psychological adjustment. For example, higher levels of conscientiousness might be associated with higher exposure to news, as conscientious individuals are more likely to consider it a duty to be up to date with daily happenings. Conscientiousness and extraversion have, for example, been found to be related to a sense of civic duty which includes being informed with national news and public issues (Weinschenk, 2014). Higher conscientiousness (in combination with extraversion) has been found to serve as a protective factor against depression (Boudouda & Gana, 2020). Further research on individual characteristics that could buffer news exposure and psychological well-being is thus needed.

Within the second part of our study, we also examined differences between readers of the selected soft and hard newspapers. While we would like to emphasize that the results were not statistically significant (except for anxiety), an emerging trend shows that, on average, those who routinely engage in reading the chosen hard newspaper exhibited slightly lower levels of stress, anxiety, depression and higher self-esteem than the soft newspaper readers. We believe that a major reason why we did not find statistically significant results in this part of the analysis is our comparatively small sample size. To this point, tentative evidence from previous work suggests that exposure to soft news can temporarily increase mood, but is associated with higher levels of depression, anxiety, stress, and lower self-esteem levels over a longer period (Boukes & Vliegenthart, 2017). Another finding from this study (Boukes & Vliegenthart, 2017) has also found that individuals who follow soft news have lower mental well-being levels than individuals who follow hard news. The aforementioned study involved a much larger sample ( $N = 6,386$ ) and we believe we would achieve similar, significant results with a larger sample as well. The significant difference in anxiety scores, which was found between those who read the chosen hard newspapers and those who do not report following any of the two newspapers, suggests that in some cases exposure to news might be a source of anxiety, due to the amount of negative information found in news reporting (Balzarotti & Cicero, 2014; McIntyre & Gibson, 2016; Szabo & Hopkinson, 2007).

Soft news often includes sensationalistic content and a reporting style which provokes an emotional reaction and physiological stimulation in the viewer (Grabe

et al., 2001, 2003). This content is often negative and graphic and includes scenes of violence, catastrophe, crime, suffering, and war (Maier, 2010). Frequent exposure to such information may lead to negative long-term consequences on the individual. However, we acknowledge that the causal link might be in the opposite direction as well - people who possess lower self-esteem and higher levels of depression, anxiety and stress may be more likely to seek sensationalistic news content. Another possible explanation for the lack of statistically significant differences between the groups is that the techniques, typically used in soft news, have spread to hard news reporting as well, making it increasingly more difficult to differentiate between the two types of news (Reinemann et al., 2012). This would suggest that the long-term impact of both types of news has also become similar.

While we are not able to make definitive statements based on our findings, our results in combination with previous studies (Boukes & Vliegthart, 2017; Davey & Wells, 2006; Garret et al., 2018) could suggest that individuals with lower self-esteem are more inclined to follow soft news, which may generate opportunities for positive self-evaluations due to its focus on negative stories. Lower self-esteem is associated with negative psychological functioning, including higher levels of stress, depression, and anxiety (Sowislo & Orth, 2013). However, this strategy could be seen as a double-edged sword as it has short-term benefits (immediate positive self-evaluations and *schadenfreude*) while having negative long-term consequences. Previous research has shown that anxious and depressed individuals more frequently focus on negative information and information that aligns with their current emotional state (Davey & Wells, 2006), this further potentiates feelings of anxiety and depression. Similarly, individuals under stress are more focused on news concordant with their mood (Garret et al., 2018). Additionally, studies on *schadenfreude* have shown that individuals who have acutely or chronically threatened self-esteem, experience stronger feelings of *schadenfreude*, as well as more positive self-evaluations after being exposed to information that serves as an opportunity for positive self-comparison and self-evaluations (Van Dijk et al., 2011).

The part with manipulation also showed no statistically significant differences between the three conditions (soft news, hard news, and the control group), however, a trend can be observed. The results show that participants in the soft news condition had the highest scores on the Rotter Incomplete Sentences Blank (Rotter, 1950) after being exposed to news, followed by the control condition. In contrast, participants in the hard news condition had the lowest scores as assessed by the Rotter measure. As the Rotter incomplete sentence blank is a scale of general adjustment that is likely affected by many other factors besides our manipulation, we argue that even small differences between the groups (albeit not statistically significant) might have some interpretational value. While fully acknowledging that our results were not statistically significant, we believe our findings can be best interpreted in light of the observed trend in combination with findings from previous research.

The trend of slightly elevated Rotter scores among those exposed to the soft newspaper screenshots in manipulation could be because soft news can include lighter topics such as humour, sex, and celebrity reporting, and is not necessarily filled with violence and destruction (Baum, 2003; Grabe et al., 2001; Vettehen et al., 2005). The presence of these lighter topics can have a more positive impact on the reader's mood. A recent study by McIntyre and Gibson (2016) found that individuals who read soft news as part of the study had higher mood than those who were reading hard news regardless of the emotional valence of the stories. The authors explain this could be because soft news is often reported in a more light-hearted way, focusing more on individuals and less on political relevance. Some authors even argue that the production techniques used in soft news can distract the reader from daily worries and serve as a form of retreat from everyday problems, especially when the content is less negative, presented in a more emotionally gripping way, more personalized and more focused on the real-life stories of individuals (Boczkowski & Mitchelstein, 2010). Similarly, specific characteristics of soft news reporting, such as a personalized narrative, have been found to alleviate the effects of otherwise negative information (Rucinski, 1992). In a previously mentioned study on the negative effects of news exposure (Boukes & Vliegthart, 2017), the authors found that short-term exposure to soft news increased self-reported mood. They claim that these findings could be explained by the predominance of entertaining content in their chosen soft newspapers (Bartsch & Schneider, 2014).

Another plausible explanation, especially because the topics included in the chosen newspaper primarily feature more morbid themes involving violence and destruction, is that the elevated Rotter scores among the participants exposed to screenshots of the chosen soft, sensationalistic newspaper could, in part (once again), be explained by the concepts of *schadenfreude* and social comparison. Because humans have a strong need for being accepted by society, perhaps it is not surprising that feelings of *schadenfreude* are not often discussed. These feelings, however, could be more common than we might think. *Schadenfreude* had been throughout history described as an immoral, evil emotion (Baudelaire, 1855), as harmful to social relations (Heider, 1958) and as a cruel and mean feeling, which is a sign of moral weakness (Schopenhauer, 1841). *Schadenfreude* also seems to be universal, as researchers have found the ventral striatum to be the neurobiological basis for the emotion (Shamay-Tsoory et al., 2007; Takahashi et al., 2009). *Schadenfreude* could therefore be a universal reaction to the misfortune of another (Gao et al., 2014). This is in line with research done by Van Dijk et al. (2012), which suggests that *schadenfreude* is a universal emotion, shared with all humans.

A study by Xiang et al. (2005) found that individuals who were informed about another's misfortune showed more empathy on the explicit level and more *schadenfreude* on the implicit level. We believe our use of the Rotter Incomplete Sentence Blank, a semi-structured projective technique, was constructive in gauging



internal dynamics on a more implicit level. This is also why we decided to use the measure despite it being a more general measure of psychological well-being.

Perhaps the most important limitation of our study was our sample size. Due to the coding required in qualitative techniques, we decided to make a trade-off between sample size and the implicit information gained through the Rotter incomplete sentence blank measure. Another limitation of the study was that due to the manipulation being part of the online survey, we could not control whether our participants were truly paying attention and looking at the newspaper screenshots, while they were being shown. This obstacle however could only be avoided in a very controlled setting, with a researcher observing the participants while they were taking part in the study. Additionally, a limitation in our study design was using an online survey format that involves the common issues that such a format brings. These include sampling issues, a potential lack of motivation to finish the survey, and concerns regarding how focused participants are while filling out surveys. Because specific soft newspapers can vary significantly in the types of content they focus on, it would be beneficial to categorize the newspapers used via a content analysis for empirical clarity (Vettehen et al., 2005). However, this has notoriously posed a challenge to those researching the area (Reinemann et al., 2012).

We believe the present study was valuable due to its design through which direct exposure to news on changes in mood (Rotter scores) could be observed. A second benefit was our use of a semi-structured technique, which allowed us to look at the effects news exposure had on our participants on a more implicit level. In general, research on the effects of soft and hard news on emotional states is scarce and our study is beneficial in adding to this kind of literature. To our knowledge, previous studies have not examined the potential importance of *schadenfreude* and similar affective dynamics as motivational factors for individuals to follow news media. Our investigation is thus among the initial studies examining these specific dynamics. However, due to the mostly statistically insignificant findings of our study, we suggest the use of larger samples in similar future research. As news seems to be ever-present in our daily lives, we encourage further research on the potential emotional consequences of news exposure.

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