To what Extent does Maturity of Psychological Defence Mechanisms moderate the Relationship between Negative News Exposure and Prosocial Behaviour as mediated by Negative World Views?

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Abstract

A rapidly growing body of research has demonstrated that watching the news may lead to a decrease in helping behaviour. This is because increasing displays of human suffering have made news consumption a psychologically risky undertaking. Fear-driven news content runs danger of shattering recipients' basic assumptions about a just, benevolent world and themselves as morally decent people. Therefore, individuals may have to protect their self-image from unwanted emotions such as guilt or shame by making use of psychological defence mechanisms. Mature overall defensive functioning (ODF) was hypothesized to attenuate the detrimental impact of negative news consumption and negative world views on prosocial behaviour. This mechanism was tested in a correlational study using a moderated mediation model. 88 participants took part in the study (52.3% female, 76.1% German, mean age = 28.3 years, SD = 13.0) in which they indicated their news media consumption and completed the World Assumptions Scale (WAS), Defence Mechanisms Rating Scale – Self Report – 30 (DMRS-SR-30), and the Prosociality Scale (PS). Inferential statistics revealed no significant correlations which is why no support for the hypothesized effect mechanism was found. Possible limitations may have been the complex correlational design, as well as measurement choices regarding the WAS and the DMRS-SR-30. Future implications, thus, include employing simpler research designs and doubling measures for participants' world views and maturity of defence.

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"… it is quite likely that the media do not serve so as to sensitise us to moral problems. Quite the contrary; the media rather tend to have an anaesthetic effect. […] It is perhaps not unreasonable to suggest that the media mean the destruction of the moral values of solidarity." (Tester, 1994, p. 107 as cited in Höijer, 2004)

This quote provides a stark contrast to the widely-held and well-substantiated belief that following the news media is a prerequisite for helping behaviour as it provides individuals with the information needed to step into action (Woodstock, 2014). In other words, the flood victims in Malawi cannot be helped if no one has ever heard of that flood. However, and not only since news about the Corona pandemic and the war in the Ukraine has overshadowed the agenda, more and more people feel that watching the news has become a "psychologically risky pursuit" (Serani, 2008, p. 4). Serani (2008) holds that since 9/11, news media publish more trauma-driven and fear-based content. As a consequence, news gets increasingly negative and sensationalistic (Soroka & McAdams, 2015; van der Meer & Hameleers, 2022), photographs are becoming more lurid, and there is a higher focus on people and human suffering (Höijer, 2004). As a consequence, those with higher news consumption tend to feel more powerless (Woodstock, 2014) and emotionally blunt (Seu, 2015), have lower levels of mental well-being (Boukes & Vliegenthart, 2017) and trust in others (Han et al., 2019). Furthermore, Serani (2008) points out that recipients of horror stories on the news can suffer indirect traumatization which puts them at risk for symptoms of depression, anxiety and PTSD.

However, what is of supreme interest in light of this study are the findings that being better informed about the world's atrocities does not lead to intervening action (Seu, 2003). Instead, increased news consumption may actually lead to a decrease in helping behaviour (Han et al., 2019, Woodstock, 2014). Seu (2015) underlines the faultiness of the notion that mere information about human suffering suffices as a motivation to act. Serani (2008) and many other scholars (Höijer, 2004; McNaughtonCassill & Smith, 2002; Soroka & McAdams, 2015) argue that news media's neo-capitalist leitmotif "if it bleeds, it leads" (Serani, 2008, p. 241) exploits people's pull towards negative stimuli. At the same time, however, it commodifies human suffering making the audience apathetic bystanders without moral commitment (Höijer, 2004). This "anaesthetic effect" (Tester, 1994, p. 107, as cited in Höijer, 2004) of the media is vividly demonstrated by a so-called news-resister who purposively limits her news consumption to remain motivated to engage in the good cause:

> I used to be really cognizant of the news and really politically active. No longer. I don't want to spend my entire life ruminating on how much the world sucks. What I want to do is actively engage in creating the world that I want to live in every single day … And I feel like on some level engaging with the large scale news media just takes me back into that 'the whole world sucks' place, instead of, like, the solution place and trying to create something positive every day. (Woodstock, 2014, p. 9)

In line with this quote, Boukes and Vliegenthart (2017) attest that audiences are declining and tune out in order to avoid negative hedonic experiences. Seu (2003) agrees that news consumers reside to a self-defensive passivity as they feel threatened by unwanted emotions such as disgust, helplessness and guilt, as well as by their own demands to be righteous and morally good people. In order to protect from these disturbances, they shut off and turn away, which is why witnessing

human suffering on the news ceases to trigger genuine compassion and acts of solidarity (Seu, 2003). Instead, it may lead to developing traumas (Serani, 2008; Seu, 2003) and forming overly pessimistic world views such as those expressed by the news-resister (Woodstock, 2014). These serve as a justification to defend against in order to avoid feelings of responsibility and guilt (Seu, 2003). Following this line of reasoning, this paper suggests that a decrease in helping behaviour followed by negative news consumption may be influenced by individual's 1) world views, and 2) use of psychological defence mechanisms. The theoretical underpinnings of these two constructs, as well as their relationships with negative news exposure and helping behaviour will be elaborated on in the following sections.

Effects of Negative News Media on Recipients' World Views

Forming generalized negative world views followed by news media consumption is broadly supported by empirical research. McNaughton-Cassill and Smith (2002) showed that by lowering people's trust in others, increased news media consumption led to more negative world views. Van der Meer and Hameleers (2022) added that negative news media may promote negative and incorrect world views in its audiences and generate irrational fears in them. They argue that these distorted worldviews are triggered by the news media's tendency to falsely present single, negative incidents as daily reality (Van der Meer & Hameleers, 2022). This skewedness of worldviews is further depicted by studies showing that individuals who watched more news had a higher perception of problems and unsafety in both their community and the nation in general (Gerbner et al., 1999; McNaughton-Cassill & Smith, 2002). They further demonstrated more fatalistic and pessimistic thinking, lower self-esteem, and negative expectations of others (Ecer, 2020; Han et al. 2019; Serani, 2008). These drastic downward

changes in individuals' world views are believed to be symptoms of secondary traumatization through fear-based news (Serani, 2008).

In order to explain how traumatization may trigger such radical changes in world views, Janoff-Bulman (1989) introduced the theory of shattered world assumptions. He claims that humans have a general need for a stable set of organized knowledge structures, also termed schemas, in order to function in a complex, potentially threatening world (Janoff-Bulman, 1989). An even higher need for stability, as well as looser ties to reality characterize the more general schematic structures that serve to make sense of this world on a deep and abstract level. It is, however, this deepest level of assumptions that is threatened by traumatic events: "Long-, and often implicitly, held beliefs about the world and oneself prove invalid in the light of sudden misfortune" (van Bruggen et al., 2018, p. 816). These cracks in the foundations of individuals' meaning-making system endanger the viability of their most fundamental theories about the world, others, and themselves. These include a favourable self-image, beliefs in the personal invulnerability, as well as assumptions of a stable, just, and meaningful world (Janoff-Bulman, 1989; van Bruggen et al., 2018).

How such a radical decline in assumptions about the world, self and others triggered by negative news consumption may also lead to a decrease in prosocial behaviour is outlined in the following section.

Effects of Negative World Views on Prosocial Behaviour

Han et al. (2019) demonstrate that the negative relationship between negative news consumption and helping behaviour was fully mediated by a decrease in participants' trust in others. Such mistrust stays in contrast to people's general assumptions of a stable and safe world which may represent an example of how negative news consumption may decrease people's

prosocialness by destabilizing their fundamental world views. In a similar vein, Shamionov et al. (2019) show that an individual's tendency to socially engage is largely dependent on their belief in a just world and their positive attitude of others. In contrast, a lacking sense of self-worth may lead to a decreased likelihood to volunteer (Shamionov et al., 2019). Solobutina and Nesterova (2017) conclude that compared to a control group, "volunteers have prevailing belief in the justice of the world, the strength of kindness and the responsiveness of people" (Solobutina & Nesterova, 2017, p. 2400). They further believed in society's positive evaluation of them and their power to actively improve society (Solobutina & Nesterova, 2017).

These findings demonstrate that a sense of self-efficacy, positive evaluations of others and a belief in a just world are fundamental characteristics of people engaging in prosocial behaviour. Vice versa, a negative decline in these postulates may lead to a decreased likelihood to socially engage. As argued earlier, forming such pessimistic worldviews may serve as a defence mechanism in order to reject the blame and maintain a positive self-image. The next chapter further elaborates on this dynamic.

Psychological Defence Mechanisms and their Relationship with Negative News, World Views and Prosocial Behaviour

Psychological defence mechanisms were first found in Sigmund Freud's early works, which were later finalized by his daughter Anna Freud and further elaborated on by several other authors (Seu, 2003). Despite the resulting differences between theories, all of them have in common to centre around people's striving for 1) intimacy in their relationships, 2) a (morally) decent and efficacious self-image, and 3) a stable, benevolent and meaningful view of the world (Hart, 2014). The current gold standard theory by Vaillant (1994), thus, considers psychological defence mechanisms to be unconscious processes that serve to protect the individual from threats

to one's ego, self-esteem, and integration of the self. By altering an individual's perception of a situation, defence mechanisms regulate excessive feelings of anxiety, guilt or shame which may result from thoughts and feelings conflicting with cultural expectations or the own conscience (Snarey & Vaillant, 1985; Vaillant, 1994).

In his empirically validated hierarchy of defences, Vaillant (1994) distinguishes between more and less adaptive defence mechanisms. Adaptive, also called mature defences (e.g. humour, sublimation, altruism) keep an individual's perception of reality intact, thus granting them genuine access to their own emotions and enabling them to effectively deal with the stressor. Therefore, these adaptive defences typically lead to constructive action and successful modification or resolution of the stressor (Di Giuseppe & Perry, 2021; Vaillant, 1994). In contrast, maladaptive, or immature defence mechanisms distort some aspect of reality (e.g. through denial, projection, rationalization) which leads the individual to bypass unwanted emotions and perform an inappropriate action or none at all (Kwon, 2000). The ways in which the maturity of an individual's psychological defence mechanisms may influence the relationship between negative news consumption, negative world views and a lack of prosocial behaviour are plentiful.

Firstly, and most obviously, altruism belongs to the mature defences (Di Giuseppe & Perry, 2021), meaning that predominant use of mature defences may increase the likelihood of performing altruistic, prosocial actions.

Secondly, the three domains of defence, being 1) relationships to others, 2) self-esteem and agency, and 3) benevolent and meaningful worldviews closely resemble the aforementioned deep structures of one's world assumptions (Janoff-Bulman, 1989) which are endangered by threatening news content. This suggests the notion that adaptive defences, by integrating

individuals' thoughts, feelings and actions and aligning them with reality, also prevent one's world views from being shattered by negative news. As a consequence, individuals may preserve more positive and realistic world views and are more likely to productively step into action. Vice versa, maladaptive defences may increase the likelihood of shattered world assumptions, as well as the inability to constructively rebuild them (Vaillant, 1994). Consequentially, they may view the world, themselves and others more negatively and fail to take constructive action (e.g. provide help to those in need in order to genuinely resolve feelings of guilt).

Thirdly, empirical findings support this line of reasoning by demonstrating that maladaptive defences were associated with psychopathology and psychological maladjustment (Kwon, 2000), as well as emotional exhaustion (Di Giuseppe et al., 2019) malevolent interpersonal expectations (Porcerelli et al., 2006) and self-esteem instability (Zeigler-Hill et al., 2008). In light of the aforementioned findings that these factors decrease the likelihood of helping behaviour (Shamionov et al., 2019, Solobutina & Nesterova, 2017; Han et al., 2019), it seems reasonable that maladaptive defences may contribute to this dynamic. Shamionov et al. (2019) underline that individuals' inability to uphold an integrated, positive self-image (i.e. to fulfil the main function of psychological defence) obstructs prosocial behaviour because these intrapersonal struggles leave little resources to deal with the problems of others. On the contrary, adaptive defence mechanisms were found to be highly negatively related with depression and anxiety (Di Giuseppe et al., 2019), and positively related with psychological adjustment (Di Giuseppe & Perry, 2021), well-being (Di Giuseppe et al., 2019), and emotional intelligence (Pellitteri, 2002) which may be effective resources in constructively dealing with displays of human suffering on the news.

Present study

It should be noted that no study is known that investigates how news consumers make use of psychological defence mechanisms in order to protect one's world assumptions from being shattered. Also, a decrease in prosocial behaviour as a result of this mechanism has not yet been researched. This literature gap is intended to be targeted by this study for theoretical and practical reasons. For the former, intrapsychic factors and mechanisms might be detected that lead to interpersonal differences in prosocial behaviour as a reaction to threatening news content. For the latter, it may offer a remedy for those who feel unable to stay informed by the news and socially engage at the same time (e.g. news-resisters). If maturity of defence or negative world views indeed predict levels of helping behaviour, these constructs may represent pivotal elements and tangible ways to reconcile news consumption and prosocial engagement. Thus, this study seeks to integrate the outlined theoretical considerations into a coherent model which provides an attempt at answering the leading question of this paper: To what extent are negative world views and maladaptive defence mechanisms associated with a decrease in prosocial behaviour as a consequence of negative news exposure? In order to investigate this relationship in a stepwise manner, five hypotheses are proposed:

H1: The more participants were exposed to negative news, the less prosocialness they reported.

H2: The more participants were exposed to negative news, the more negative world views they reported.

H3: The more negative world views participants reported, the less prosocialness they reported.

H4: The less mature defence mechanisms participants reported, the greater the effect of negative news exposure on negative world views.

H5: The less mature defence mechanisms participants reported, the greater the effect of negative world views on prosocialness.

Method

Design

The study employed a correlational moderated mediation design with the independent variable *negative news exposure*, the dependent variable *prosocialness*, the mediating variable *negative world views* and the two-way moderator *maturity of defence mechanisms* (see Figure 1). This variable moderated both the relationships between 1) negative news exposure and negative world views, and 2) negative world views and prosocialness.

Figure 1

Moderated mediation model
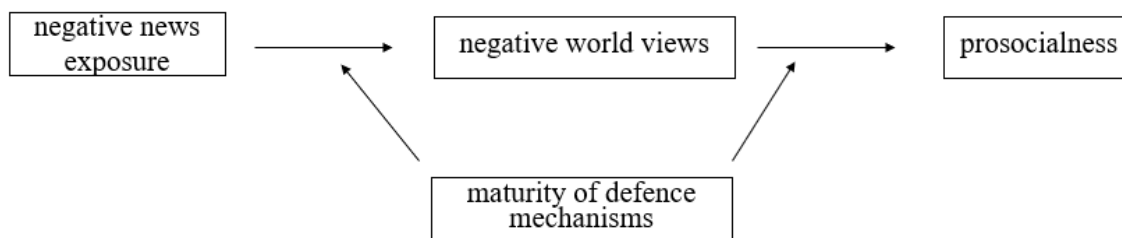
Participants

94 participants were included in the study. Six participants were excluded because of too many missing values or suspected lack of serious participation, judged at face value (e.g. participants having indicated one minute of news consumption with one percent of that being negative news). This resulted in a total number of 88 participants of which 52.3% identified as female, 45.5% as male, 1.1% as non-binary, and 1.1% would rather not say. 76.1% of the participants came from Germany, 12.5% from the Netherlands, and 11.4% from other countries. Participants were ranging in age from 18 to 68 ($M = 28.3$ years, $SD = 13.0$). The sampling

method can be described as convenience sampling: Students at the University of Twente chose to take part via the platform SONA in exchange for 0.25 SONA-credits. Further, the link to the study was sent to interested, acquainted individuals. Inclusion criteria were that participants had to be 18 years of age and above and were proficient in English (at least B1-level). Participants gave their informed consent to take part in the study and ethical approval was granted by the Behavioural, Management and Social Sciences Ethics Committee at the University of Twente.

Materials

In order to measure the four variables, two items were used to indicate participants' levels of negative news consumption and three existing questionnaires were used to assess respondents' negative world views, maturity of defence mechanisms, and prosocialness, respectively. Properties of these measurements are described in the following.

Measure of negative news exposure

Two items were measuring participants news consumption: The first asked: "On an average day, how many minutes do you consume or are you exposed to news media?" and the second asked: "Of your total news consumption/exposure, what percentage would you consider negative news?" In brackets, a definition of negative news followed that stated: "A negative news story is defined as one that focuses on the harmful outcomes of an event or issue. It often comes with a particularly negative overtone and may involve topics such as conflict, tragedy, crime, accidents, disasters etc.)" This definition was adapted from Cazzamatta (2021) and merged several definitions (cf. Bednarek & Caple, 2014; Caple & Bednarek, 2016, Harcup & O'Neill, 2017) into one in order to give participants a comprehensive picture of what would count as negative news and what would not. Then, the value indicating the percentage of negative news was transformed into decimal numbers and multiplied with the amount of time

spent watching news in general. This value represented the minutes spent consuming or being exposed to negative news on an average day.

World Assumptions Scale

In order to measure participants' world views, the World Assumptions Scale (WAS; see Appendix A) was used. In this study, acceptable internal consistency was found with the value for Cronbach's Alpha of $\alpha = .79$. It is a 32-item self-report measure which is frequently used in trauma research but is also suited for non-clinical samples (van Bruggen et al., 2018). The WAS relies on the theory of shattered assumptions by Janoff-Bulman (1989), that was outlined previously. The items represent eight assumptions about 1) the benevolence of the world and the people (e.g. "There is more good than evil in the world"), 2) the meaningfulness of events including the categories justice, controllability, and randomness (e.g. "Generally, people deserve what they get in this world"), and 3) the worthiness of the self, denoting an individual's belief that he or she is a morally good and decent human being (e.g. "I am very satisfied with the kind of person I am") (van Bruggen et al., 2018). Items are rated on a 6-point scale from "strongly disagree" to "strongly agree" which results in a total score ranging from 32 to 192 with lower values indicating more negative world views. Studies about the psychometric properties of the WAS are somewhat mixed (Kaler et al., 2008). Whereas some authors found support for the eight-factor structure, as well as significant relationships demonstrating good validity (Elklit et al., 2007; Janoff-Bulman, 1989; van Bruggen et al., 2018), others pointed out low test-retest reliability and low fit indices for the proposed eight-factor structure, as well as little support for construct and content validity (Jeavons & Godber, 2005; Kaler et al., 2008).

Despite these mixed findings, the WAS is used, firstly, because it is still the most widely used measure of post-traumatic beliefs and attitudes (Kaler et al., 2008). Secondly, because the

three domains of 1) self, 2) others, and 3) the world are equally inherent to the WAS (Janoff-Bulman, 1989) and to psychological defence (Hart, 2014), which ensures a good fit between measurements. Thirdly, even if the WAS's ability to validate the theory of shattered assumptions is questionable (Kaler et al., 2008), it may still serve as a valid measure of participants' general world views.

Defence Mechanism Rating Scales – Self Report – 30

Participants' maturity of defence mechanisms was measured with the Defence Mechanism Rating Scales - Self Report - 30 (DMRS-SR-30; see Appendix B) which is a 30-item self-report questionnaire representing the full hierarchy of 28 defence mechanisms according to the "gold-standard theory" (Di Giuseppe et al., 2020, p. 2) by Vaillant (1992). In this study, good internal consistency was found with the value for Cronbach's Alpha of $\alpha = .89$. The items (e.g. "Did you avoid thinking about personal problems or feelings?" or "Did you take an active role in solving problems that arose?") are rated on a 5-point scale from "not at all" to "very often/much". Next to scores for the seven defence levels (from most to least adaptive) and three defence categories (mature, neurotic, immature), one overall defensive functioning score (ODF) combines the scores of all 28 defence mechanisms into one and thus, indicates participants' overall maturity of defence with higher scores indicating more maturity (Di Giuseppe et al., 2020). The ODF has highly satisfactory psychometric properties with very good criterion ($r = .73$) and concurrent validity ($r = .63$), internal consistency (Cronbach's alpha = .89), convergent validity (ranging from -.54 to -.40) (Di Giuseppe et al., 2020) and discriminant validity ($r = -.15$) (Prout et al., 2021). Due to the very good psychometric properties, the ODF was used to measure participants' maturity of defence mechanisms.

Prosociality Scale

The Prosociality Scale (PS; see Appendix C) is a 16-item self-report measure that assesses individual differences in the tendency to act in favour of other people, i.e. to behave prosocially (Kanacri et al., 2021). In this study, good internal consistency was found with the value for Cronbach's Alpha of $\alpha = .84$. The scale includes four aspects of prosocialness: 1) helping (e.g. "I help immediately those who are in need", 2) sharing (e.g. "I share the things that I have with my friends"), 3) caring of (e.g. "I spend time with those friends who feel lonely"), and 4) feeling empathic with others (e.g. "I intensely feel what others feel"). Items are answered on a 5-point scale from "never/almost never" to "always/almost always" so that scores range between 16 and 80 with higher scores indicating higher levels of prosocialness. Also, the PS has very adequate psychometric properties. Its reliability and validity have been widely established via classical test theory and item response theory (Biagioli et al., 2016; Caprara et al., 2005; Kanacri et al., 2021). Kanacri et al. (2021) also performed a cross-cultural validation of the scale concluding that it represents a "relatively universal pattern of measuring prosocial behaviour" (Kanacri et al., 2021, p.10).

Procedure

Either via SONA or the direct weblink, participants were directed to the online platform Qualtrics on which the survey was performed. The first screen showed the introductory page with general information of the study. The second page included the informed consent sheet and the item ensuring informed and voluntary participation.

The main part of the survey started with items asking participants for their age, nationality and gender that they identify with. The following page asked participants to complete the DMRS-SR-30, the WAS, and the PS. The order of the questionnaires as presented to participants was randomized to compensate for early dropouts.

After having completed all questionnaires, participants were presented with a short debriefing that revealed the whole purpose of the study which was investigating the two-fold influence of maturity of psychological defence mechanisms on the relationships between negative news exposure and negative world views, as well as negative world views and prosocialness. Further, information about the sensitivity of such topics and the fallibility of questionnaires, as well as contact information for professional help was given in case participants had experienced any (psychological) discomfort after participation. A screen expressing gratitude for participation marked the end of the survey.

Data Analysis

SPSS was used to handle all data. In order to answer all five hypotheses, the proposed moderated mediation model (see Figure 1) was tested in one model using a bootstrapping approach to determine the significance of the indirect effects at various degrees of the moderator (Hayes, 2013). Moderated mediation analyses are used to test the conditional indirect effect of a moderator (i.e., maturity of defence) on the relationship between a predictor (i.e., negative news exposure) and an outcome variable (i.e., prosocialness) via a potential mediator (i.e., negative world views). Model 58 of the "PROCESS" macro tool for SPSS 22 by Hayes (2013) was used to perform this analysis. This model explicitly tests both moderating effects on the predictor to mediator path (i.e., a-path), and on the mediator to outcome path (i.e., b-path).

Results

Of the total 88 participants, the "PROCESS" macro tool excluded eleven participants due to unfit or missing data, which resulted in 77 respondents included in the moderated mediation analysis.

Descriptive statistics revealed that on an average day, participants were exposed to negative news for 44.5 minutes (*SD* = 44.7). Significant correlations were found between nationality and age, nationality and negative news exposure, as well as nationality and prosocial behaviour (see Table 1). Also, there was a weak, positive correlation between ODF and PS, *r*(78) = .23, *p* = .042. This indicates that higher use of mature defence mechanisms was associated with higher levels of prosocialness.

Table 1

Descriptive statistics and correlations

Variable	*n*	*M*	*SD*	1.	2.	3.	4.	5.	6.	7.
1. Age	88	28.3	13.0	1						
2. Gender	88			.057	1					
3. Nation.	88			-.304**	.088	1				
4. NNE	88	44.5	44.7	-.027	.098	,322**	1			
5. ODF	78	4.8	0.2	-.093	-.053	-.134	,038	1		
6. WAS	78	117.6	13.3	.039	-.189	-,099	-,185	.116	1	
7. PS	79	60.1	7.5	-,014	-.028	-,300**	,000	,231*	,063	1

Note. Nation. = Nationality; NNE = Negative News Exposure

*p < .05. **p < .01.

Inferential statistics revealed that the conditional indirect effects of negative news exposure on prosocial behaviour were insignificant at each low ODF (1 *SD* below the mean, effect = -.007, *SE* = .011, 95% CI [-0.03, 0.01]), medium ODF (*M* = 4.817, effect = -.001, *SE* = .004, 95% CI [-0.01, 0.01]) and high ODF (1 *SD* above the mean, effect = .001, *SE* = .005, 95% CI [-0.01, 0.01]). As zero lay within the bootstrapping intervals in each case, there is no support

for maturity of defence moderating the relationships between 1) negative news exposure and negative world views, and 2) negative world views and prosocialness. Further inferential statistics regarding the moderated mediation model will be reported for each hypothesis separately.

Effect of Negative News Exposure on Prosocialness

The first hypothesis stated that the more participants were exposed to negative news, the less prosocial behaviour they reported. This relationship was found to be insignificant (B = -.005, SE = .02, t = -.233, p = .816), meaning that higher levels of negative news exposure were not associated with lower levels of prosocial behaviour.

Effect of Negative News Exposure on Negative World Views

The second hypothesis stated that the more participants were exposed to negative news, the more negative world views they reported. This relationship was found to be insignificant (B = -.65, SE = .936, t = -.701, p = .486) meaning that higher levels of negative news exposure were not associated with higher levels of negative world views.

Effect of Negative World Views on Proscialness

The third hypothesis stated that the more negative world views participants reported, the less prosocialness they reported. This relationship was found to be insignificant (B = 1.436, SE = 1.699, t = .845, p = .401) meaning that higher levels of negative world views were not associated with higher levels of prosocialness.

Moderation of a-path

The fourth hypothesis stated that the less mature defence mechanisms participants reported, the greater the effect of negative news exposure on negative world views (a-path). This interaction effect between negative news exposure and maturity of defence mechanisms was

found to be insignificant (B = .124, SE = .193, t = .641, p = .523) meaning that maturity of defence did not moderate the effect between negative news exposure and negative world views.

Moderation of b-path

The fifth hypothesis stated that the less mature defence mechanisms participants reported, the greater the effect of negative world views on prosocialness (b-path). This interaction effect between negative world views and maturity of defence mechanisms was found to be insignificant (B = -.294, SE = .351, t = -.835, p = .406) meaning that maturity of defence did not moderate the effect between negative world views and prosocialness.

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Discussion

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Statistical analyses showed that the data did not support any of the five hypotheses. In connection with the theoretical and empirical underpinnings of this research, this next section will offer post hoc explanations for the insignificant results.

Effect of Negative News Exposure on Prosocialness

Participants with higher levels of negative news exposure did not report lower levels of prosocialness. This finding is incongruent with those studies demonstrating a decrease in helping behaviour as a consequence of negative news exposure (Han et al., 2019; Woodstock, 2014; Seu, 2003; Seu, 2015). This may be because Woodstock (2014), in her research about news-resisters, employs a purely qualitative design with an unrepresentative sample having chosen participants based on in-depth interviews. Thus, the finding that some people experience decreases in their own prosocialness as a consequence of increased news consumption was nothing more than a description of her purposively selected sample and a necessary criterion to be included in that sample. She further admits that media's role in promoting or dampening civic engagement is still largely unclear (Woodstock, 2014). Seu (2003; 2015) centred her research around humanitarian

campaigns that may include even more ferocious pictures and appeals triggering inner moral conflicts than a negative news story.

However, the mediation effect by Han et al. (2019) suggesting that negative news exposure via negative cognitions (e.g. social trust) leads to decreased helping behaviour was basically adopted one-to-one in the moderated mediation model (WAS = cognitions/social trust, prosocialness = helping behaviour). Regardless of the large conceptual overlap, the critical factor in the study by Han et al. (2019) might have been the experimental design. Unlike correlational designs, experiments are able to capture the immediate changes in cognition and affect as a causal response to an actual stimulus (i.e., negative news story) (Schulz et al., 2019). Self-report measures to indicate general states and behaviours are, in contrast, at increased risk of potentially disrupting factors such as memory bias, social desirability, or self-deception (Paulhus & Vazire, 2007). Thus, the correlational research design employing self-report measures exclusively may have been a decisive factor in explaining the insignificant results with regard to the first hypothesis.

Effect of Negative News Exposure on Negative World Views

Participants with higher levels of negative news exposure did not report higher levels of negative world views. The contradiction with plenty of research demonstrating this relationship (Ecer, 2020; Gerbner et al., 1999; McNaughton-Cassill & Smith, 2002; van der Meer & Hameleers, 2022) may result from different operationalizations of world views. McNaughton-Cassill and Smith (2002), as well as van der Meer and Hameleers (2022) understood it as participants' indication of problems and crime levels in their neighbourhood or nation. Similarly, Gerbner et al. (1999) were interested in respondents' assessment of safety issues in their community and the world in general (e.g. crime rates, chances to become a victim). Ecer (2020)

equated participants' choices of optimistic and pessimistic adjectives with their outlook on the future.

However, no study is known that measured negative world views as a consequence of negative news exposure using the WAS. Although the scale may to some extent encompass the observed constructs of the above mentioned studies, its items are much less distinct but broader, more general in nature, which may explain the contradictory findings. Likewise, secondary traumatization, as suggested by Serani (2008) may not be adequately measurable by the WAS. This is demonstrated by Sprang et al. (2019) who point out that the WAS does cover parts, but not the whole picture of secondary traumatic stress. The unexpected findings regarding the second hypothesis may thus be partially explained by the broad phrasings in the WAS and its inadequacy to measure secondary traumatization.

Effect of Negative World Views on Prosocialness

Participants with higher levels of negative world views did not report lower levels of prosocialness. The inconsistency with previous studies (Han et al., 2019; Shamionov et al., 2019; Solubutina & Nesterova, 2017) may be explained by a different operationalization of prosocialness and differences in measurement. In the study by Shamionov et al. (2019), volunteering was only one of twelve forms of social activity. Other forms included recreational or self-developmental activities, as well as internet or networking activities. While those were found to be associated with different world views, volunteering, in fact, only positively correlated with the luckiness subscale of the WAS.

Also, Solubutina and Nesterova (2017) found the only significant differences in WAS scores between volunteering and non-volunteering individuals on the kindness of people subscale. They did find that participants' belief in a just world, as well as in people's kindness

and responsiveness was related to more volunteering. However, their main findings were produced by a combination of measurements (WAS & purpose-in-life test) and pertained to ways in which volunteers' world assumptions were associated with their sense of meaningfulness, purpose and agency in life (Solubutina & Nesterova, 2017). As this study solely used the WAS to assess participants' world views, a reproduction of such findings was not possible.

Moderation of a-path and b-path

Maturity of defence did not moderate any of the relationships between 1) negative news exposure and negative world views, and 2) negative world views and prosocialness. As stated in the introduction, this element represented the literature gap that was targeted with this study. Due to the absence of tangible empirical findings, theoretical substantiations for the hypothesised effect mechanism had to rely more on essay-like publications and eclectic inferences made from related research. The inferential and abstract nature of the line of reasoning underlying this research further questions the appropriateness of self-report measures. Defence mechanisms, as stated in the introduction, are defined by operating outside of conscious awareness (Cramer, 2014) and are thus considered inapt to be measured by self-report instruments (Davidson & MacGregor, 1998). Di Giuseppe et al. (2020), as well, recognize that "results could be biased by the individual's lack of awareness of personal defensive activity" (Di Giuseppe et al., 2020, p. 2).

Another reason for the insignificant results may have been the complexity of the research design. This is supported by Kearney (2017) who underlines that in case of a rather big literature gap, a more tentative approach to research including descriptive or exploratory designs is the most appropriate course of action. Especially when the problem at hand is far from being solved, which clearly applies to this research, Kearney (2017) advises to propose less exciting and more rigorous study designs. This notion is further endorsed by the significant correlation between

maturity of defence and prosocialness. This simple association underlines the paper's assumption that mature defence mechanisms enable the individual to step into productive action (Vaillant, 1994). It further suggests that individuals with more mature defensive functioning may indeed have more available resources to deal with the problems of others (Shamionov et al., 2019). This finding could serve as a starting point from which the relationship between negative news exposure, negative world views, maturity of defence, and prosocialness may be further investigated.

Strengths and Limitations

Two central strengths of the study could be identified. The biggest strength of this study was to target a literature gap which may reveal widespread theoretical and practical implications, once examined in greater detail. The following chapter will elaborate further on these future implications. The hypothesised effect mechanism, however, connects constructs that have not been observed jointly. The novelty of this pursuit, thus, lies in having integrated many separated findings into a coherent and theoretically sound model. Although no support for the hypothesised model was found, it is considered worth retaining the model for the time being due to the eclectic but stringent theoretical foundation on which it lies.

A second asset of this study may be certain characteristics of the sample. Its size was acceptable, it covered a wide range of age groups, and gender identities were by and large realistically represented. This means that in these two regards, the sample could be considered approximately representative. Building upon this sample, enlarging it by similar sampling methods, and purposively aiming for representativeness in other demographic variables may thus be a worthwhile undertaking.

Next to these two strengths of the present study, and logically arising from the above attempts at explaining the insignificant findings, three central limitations of this study are presented.

Firstly, operationalizing negative world views with the WAS failed to reproduce the findings underpinning this research. Further, the scale has not yet been used to measure negative media effects. Thus, the sample data seemed unfit to be measured by the WAS in terms of secondary traumatization resulting from fear-based news.

Secondly, using a self-report measure such as the DMRS-SR-30 seems suboptimal in light of the rather abstract line of reasoning underlying this research and the unconscious nature of defence mechanisms (Vaillant, 1994). Despite its advantageous suitability to be administered to large samples, there are serious limitations of self-report measures assessing psychodynamic constructs (Davidson & MacGregor, 1998; Di Giuseppe et al., 2020). This limitation is further substantiated by fundamental weaknesses including memory bias, social desirability, or self-deception (Paulhus & Vazire, 2007).

Thirdly, and in close connection with the previous limitation, a purely correlational research design seems unable to capture immediate responses to negative news content. It may be suited for descriptive and exploratory research in under-researched domains (Kearney, 2017), however, the moderated mediation model might have been too complex to fulfil that purpose. The simple correlation between maturity of defence and prosocialness solidifies that notion.

In sum, the use of a purely correlational design, operationalizing negative world views with the WAS and maturity of defence with the DMRS-SR-30 were shown to be the most serious and impactful limitations to this study. Implications for future research are outlined in the following.

Future directions

The three main limitations represented by the 1) complex correlational design, 2) WAS, and 3) DMRS-SR-30 give insight about promising directions for future research. It may be fruitful to employ a simpler correlational design with fewer variables in order to build on such findings as the correlation between maturity of defence and prosocialness. It may further be an interesting endeavour to explore correlations between negative world views, prosocialness and single defence mechanisms in order to clarify their distinct functions in defending against negative news. Also, an experimental design is conceivable that manipulates the negativity of news stories between groups. Negative world views may be assessed in a pre- and post-test, and immediate defensive behaviour could be measured right where it happened.

Further, the WAS and DMRS-SR-30 should be complemented by additional measures so that their outlined weaknesses are offset and the study does not solely rely on self-report measures. Negative world views may be augmented by projective tests or the purpose-in-life test so as to ensure equal conditions to the study by Solubutina and Nesterova (2017). Alternatively, single aspects of negative world views could be investigated in an attempt to reproduce findings regarding the role of social trust (Han et al., 2019), safety concerns (Gerbner et al., 1999), or belief in a just world (Shamionov et al., 2019). Additionally to the DMRS-SR-30, the observer-rated original Defence Mechanism Rating Scale (DMRS) or the Q-sort version (DMRS-Q) could be administered in order to get a less biased, professionally informed and empirically validated assessment of participants' defensive functioning (Di Giuseppe et al., 2020).

Pursuing these future directions may be worth due to multiple theoretical and practical reasons. For the former, it may clarify the peculiar relationship between negative news exposure and prosocial behaviour. A simpler correlational design may yield results that could bring light

into the contradictory findings claiming that increased news consumption leads to either more or less prosocial engagement (Woodstock, 2014). Additionally, further investigation of the hypothesized effect mechanism may give insight into the entanglement of psychological defence mechanisms and negative world views. Correlational research on world views and single defence mechanisms may reveal possible functions of holding and expressing such pessimistic sentiments. For instance, in case such feelings were related to the defence mechanism *Projective Identification,* it may serve the purpose of shifting attention away from one's own negatively perceived character (Vaillant, 1992); in the case of a relation with the defence mechanism *Splitting*, it would demonstrate one's need to reconcile ambiguous aspects of a reality that is perceived as too complex and overwhelming (Vaillant, 1992).

Such a greater understanding of these dynamics would have great practical benefits. If maturity of defence or world assumptions would predict a lack of prosocial behaviour as a consequence of negative news exposure, these two constructs may represent pivotal elements and tangible ways to protect oneself from this undesirable effect. This would not only mean an empowerment of the news recipient who is even today often seen as helplessly succumbed to media effects but may offer a remedy for those who want to stay informed about world affairs and socially engage at the same time. As demonstrated by the example of news-resisters, many people see themselves in an either-or situation as they feel powerless, depressed and paralysed in the light of shocking events and cruel images displayed in news media (Woodstock, 2014). In such cases, cultivating a more mature style of psychological defence mechanisms, as well as adjusting one's generalized pessimistic world views to more realistic ones may represent effective ways to buffer the adverse consequences of negative news exposure. This may in the long run lead to empathising with victims in a way that preserves one's psychological

functioning and possibly even motivates to help those in need. Thus, gradually replacing one's unduly negative outlook with more realistic world views, as well as developing a more mature defence style would not only benefit the individual in many ways but would also serve those in dire need of help.

To conclude, even though no support was found for the hypothesised model, the significant correlation between maturity of defence mechanisms and prosocialness preserves the possibility that these two constructs may also play a role in negative news consumption and its consequences. By further pursuing the investigation of this dynamic in alignment with the proposed directions for future research, more clarity may be brought to the intrapsychic processes and individual differences that lead to more or less prosocial behaviour as a consequence of negative news exposure. As shown above, these may then represent pivotal elements in buffering adverse media effects and encouraging acts of solidarity towards those in need.

References

Bednarek, M., & Caple, H. (2014). Why do news values matter? Towards a new methodological

framework for analysing news discourse in Critical Discourse Analysis and

beyond. *Discourse & Society*, *25*(2), 135-158.

https://doi.org/10.1177/0957926513516041

Biagioli, V., Prandi, C., Giuliani, L., Nyatanga, B., & Fida, R. (2016). Prosocial behaviour in

palliative nurses: psychometric evaluation of the prosociality scale. *International journal*

of palliative nursing, *22*(6), 292-298. https://doi.org/10.12968/ijpn.2016.22.6.292

Boukes, M., & Vliegenthart, R. (2017). News consumption and its unpleasant side effect:

Studying the effect of hard and soft news exposure on mental well-being over

time. *Journal of Media Psychology: Theories, Methods, and Applications*, *29*(3), 137-

147. https://doi.org/10.1027/1864-1105/a000224

Caple, H., & Bednarek, M. (2016). Rethinking news values: What a discursive approach can tell

us about the construction of news discourse and news photography. *Journalism*, *17*(4),

435-455. https://doi.org/10.1177/1464884914568078

Caprara, G. V., Steca, P., Zelli, A., & Capanna, C. (2005). A new scale for measuring adults'

prosocialness. *European Journal of psychological assessment*, *21*(2), 77-89.

https://doi.org/10.1027/1015-5759.21.2.77

Cazzamatta, R. (2021). The role of the 'negativity' factor in international news coverage: A case

study of Latin America in the German press, 2000–2014. *Global Media and*

Communication, *17*(1), 3-23. https://doi.org/10.1177/1742766520946465

Cramer, P. (2015). Defense mechanisms: 40 years of empirical research. *Journal of Personality Assessment*, *97*(2), 114-122. https://doi.org/10.1080/00223891.2014.947997

Davidson, K., & MacGregor, M. W. (1998). A critical appraisal of self-report defense mechanism measures. *Journal of Personality*, *66*(6), 965-992. https://doi.org/10.1111/1467-6494.00039

Di Giuseppe, M., & Perry, J. C. (2021). The hierarchy of defense mechanisms: assessing defensive functioning with the defense mechanisms rating scales Q-sort. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.718440

Di Giuseppe, M., Ciacchini, R., Piarulli, A., Nepa, G., & Conversano, C. (2019). Mindfulness dispositions and defense style as positive responses to psychological distress in oncology professionals. *European Journal of Oncology Nursing*, *40*, 104-110. https://doi.org/10.1016/j.ejon.2019.04.003

Di Giuseppe, M., Perry, J. C., Lucchesi, M., Michelini, M., Vitiello, S., Piantanida, A., Fabiani, M., Maffei, S., & Conversano, C. (2020). Preliminary reliability and validity of the DMRS-SR-30, a novel self-report measure based on the Defense Mechanisms Rating Scales. *Frontiers in psychiatry*, *11*. https://doi.org/10.3389/fpsyt.2020.00870

Ecer, E. (2020). The emotional effects of positive and negative news through the default mode network. *2nd International Neuropsychological Summer School named after AR Luria "The World After the Pandemic: Challenges and Prospects for Neuroscience".— Ekaterinburg, 2020*, 50-55. https://doi.org/10.15826/B978-5-7996-3073-7.14

Elklit, A., Shevlin, M., Solomon, Z., & Dekel, R. (2007). Factor structure and concurrent validity of the world assumptions scale. *Journal of Traumatic Stress: Official Publication of The*

International Society for Traumatic Stress Studies, *20*(3), 291-301.

https://doi.org/10.1002/jts.20203

Gerbner, G., Morgan, M., & Signorielli, N. (1999). Profiling television violence. In K.

Nordenstreng & M. Griffin (Eds.), *International media monitoring* (pp. 335–365).

Hillsdale, NJ: Hampton Press.

Han, L., Sun, R., Gao, F., Zhou, Y., & Jou, M. (2019). The effect of negative energy news on

social trust and helping behavior. *Computers in Human Behavior*, *92*, 128-138.

https://doi.org/10.1016/j.chb.2018.11.012

Harcup, T., & O'neill, D. (2017). What is news? News values revisited (again). *Journalism

studies*, *18*(12), 1470-1488. https://doi.org/10.1080/1461670X.2016.1150193

Hart, J. (2014). Toward an integrative theory of psychological defense. *Perspectives on

Psychological Science*, *9*(1), 19-39. https://doi.org/10.1177/1745691613506018

Hayes, A. F. (2013). *Mediation, moderation, and conditional process analysis: Introduction to

mediation, moderation, and conditional process analysis: A regression-based approach.*

New York: Guilford Publications.

Höijer, B. (2004). The discourse of global compassion: The audience and media reporting of

human suffering. *Media, culture & society*, *26*(4), 513-531.

https://doi.org/10.1177/0163443704044215

Janoff-Bulman, R. (1989). Assumptive worlds and the stress of traumatic events: Applications of

the schema construct. *Social cognition*, *7*(2), 113-136.

https://doi.org/10.1521/soco.1989.7.2.113

Jeavons, S., & Godber, T. (2005). World Assumptions as a measure of meaning in rural road crash victims. *Australian Journal of Rural Health*, *13*(4), 226-231. https://doi.org/10.1111/j.1440-1584.2005.00706.x

Kaler, M. E., Frazier, P. A., Anders, S. L., Tashiro, T., Tomich, P., Tennen, H., & Park, C. (2008). Assessing the psychometric properties of the World Assumptions Scale. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, *21*(3), 326-332. https://doi.org/10.1002/jts.20343

Kanacri, B. P. L., Eisenberg, N., Tramontano, C., Zuffiano, A., Caprara, M. G., Regner, E., Zhu, L., Pastorelli, C., & Caprara, G. V. (2021). Measuring prosocial behaviors: psychometric properties and cross-national validation of the prosociality scale in five countries. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.693174

Kearney, M. H. (2017). Challenges of finding and filling a gap in the literature. *Research in Nursing & Health*, *40*(5), 393-395. https://doi.org/10.1002/nur.21812

Kwon, P. (2000). Hope and dysphoria: The moderating role of defense mechanisms. *Journal of Personality*, *68*(2), 199-223. https://doi.org/10.1111/1467-6494.00095

McNaughton-Cassill, M. E., & Smith, T. (2002). My world is ok, but yours is not: television news, the optimism gap, and stress. *Stress and health*, *18*(1), 27-33. https://doi.org/10.1002/smi.916

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R.C. Fraley, & R.F. Krueger (Eds.), *Handbook of research methods in personality psychology*, (pp.224-239). New York: Guilford.

Pellitteri, J. (2002). The relationship between emotional intelligence and ego defense mechanisms. *The Journal of psychology*, *136*(2), 182-194. https://doi.org/10.1080/00223980209604149

Porcerelli, J. H., Shahar, G., Blatt, S. J., Ford, R. Q., Mezza, J. A., & Greenlee, L. M. (2006). Social cognition and object relations scale: Convergent validity and changes following intensive inpatient treatment. *Personality and Individual Differences*, *41*(3), 407-417. https://doi.org/10.1016/j.paid.2005.10.027

Prout, T. A., Di Giuseppe, M., Zilcha-Mano, S., Perry, J. C., & Conversano, C. (2021). Psychometric Properties of the Defense Mechanisms Rating Scales-Self-Report-30 (DMRS-SR-30): Internal Consistency, Validity and Factor Structure. *Journal of Personality Assessment*, 1-11. https://doi.org/10.1080/00223891.2021.2019053

Schulz, S., Leijten, P., Shaw, D. S., & Overbeek, G. (2019). Parental reactivity to disruptive behavior in toddlerhood: an experimental study. *Journal of abnormal child psychology*, *47*(5), 779-790. https://doi.org/10.1007/s10802-018-0489-4

Serani, D. (2008). If it bleeds, it leads. The clinical implications of fear-based programming in news media. *Psychotherapy and Psychoanalysis*, *24*(4), 240-250.

Seu, B. I. (2003). 'Your stomach makes you feel that you don't want to know anything about it': desensitization, defence mechanisms and rhetoric in response to human rights abuses. *Journal of Human Rights*, *2*(2), 183-196. https://doi.org/10.1080/1475483032000078170

Seu, B. I. (2015). A double-edge sword: The role of psychoanalysis in public responses to human rights violations–denial, justifications and passivity. *Psychodynamic Practice*, *21*(1), 5-18. https://doi.org/10.1080/14753634.2014.989712

Shamionov, R. M., Grigoryeva, M. V., & Grigoryev, A. V. (2019). World assumptions and youth identity as predictors of social activity preferences. *Psychology in Russia. State of the Art*, *12*(2). https://doi.org/10.11621/pir.2019.0209

Snarey, J. R., & Vaillant, G. E. (1985). How lower-and working-class youth become middle-class adults: The association between ego defense mechanisms and upward social mobility. *Child development*, *56*(4), 899-910. https://doi.org/10.2307/1130102

Solobutina, M. M., & Nesterova, M. (2018). Motivation of Voluntary Activity and Personal World Assumptions of the Youth. *HELIX*, *8*(1), 2397-2401. https://doi.org/10.29042/2018-2397-2401

Soroka, S., & McAdams, S. (2015). News, politics, and negativity. *Political communication*, *32*(1), 1-22. https://doi.org/10.1080/10584609.2014.881942

Sprang, G., Ford, J., Kerig, P., & Bride, B. (2019). Defining secondary traumatic stress and developing targeted assessments and interventions: Lessons learned from research and leading experts. *Traumatology*, *25*(2), 72. https://doi.org/10.1037/trm0000180

Vaillant, G. E. (1992). *Ego mechanisms of defense: a guide for clinicans and researchers*. American Psychiatric Pub.

Vaillant, G. E. (1994). Ego mechanisms of defense and personality psychopathology. *Journal of abnormal psychology*, *103*(1), 44-50. https://doi.org/10.1037/0021-843X.103.1.44

Van Bruggen, V., Ten Klooster, P. M., Van der Aa, N., Smith, A. J., Westerhof, G. J., & Glas, G. (2018). Structural validity of the world assumption scale. *Journal of traumatic stress*, *31*(6), 816-825. https://doi.org/10.1002/jts.22348

van der Meer, T. G., & Hameleers, M. (2022). I knew it, the world is falling apart! Combatting a confirmatory negativity bias in audiences' news selection through news media literacy interventions. *Digital Journalism*, *10*(3), 473-492. https://doi.org/10.1080/21670811.2021.2019074

Woodstock, L. (2014). The news-democracy narrative and the unexpected benefits of limited news consumption: The case of news resisters. *Journalism*, *15*(7), 834-849. https://doi.org/10.1177/1464884913504260

Zeigler-Hill, V., Chadha, S., & Osterman, L. (2008). Psychological defense and self-esteem instability: Is defense style associated with unstable self-esteem?. *Journal of Research in Personality*, *42*(2), 348-364. https://doi.org/10.1016/j.jrp.2007.06.002

Appendix A

World Assumption Scale

Please indicate to what extent you agree with the following statements:

1. Misfortune is least likely to strike worthy, decent people.

2. People are naturally unfriendly and unkind.

3. Bad events are distributed to people at random.

4. Human nature is basically good.

5. The good things that happen in this world far outnumber the bad.

6. The course of our lives is largely determined by chance.

7. Generally, people deserve what they get in this world.

8. I often think that I am no good at all.

9. There is more good than evil in the world.

10. I am basically a lucky person

11. People's misfortunes result from mistakes they have made.

12. People don't really care what happens to the next person.

13. I usually behave in ways that are likely to maximize good results for me.

14. People will experience good fortune if they themselves are good.

15. Life is too full of uncertainties that are determined by chance.

16. When I think about it, I consider myself very lucky.

17. I almost always make an effort to prevent bad things from happening to me.

18. I have a low opinion of myself.

19. By and large, good people get what they deserve in this world.

20. Through our actions we can prevent bad things from happening to us.

21. Looking at my life, I realize that chance events have worked out well for me.

22. If people took preventive actions, most misfortune could be avoided.

23. I take the actions necessary to protect myself against misfortune.

24. In general, life is mostly a gamble.

25. The world is a good place.

26. People are basically kind and helpful.

27. I usually behave so as to bring about the greatest good for me.

28. I am very satisfied with the kind of person I am.

29. When bad things happen, it is typically because people have not taken necessary actions to protect themselves.

30. If you look closely enough, you will see that the world is full of goodness.

31. I have reason to be ashamed of my personal character.

32. I am luckier than most people.

Appendix B

Defense Mechanisms Rating Scales – Self Report - 30

In the past week, how much did you deal with difficult emotions or situations in the following ways?

1. Did you perceive others as "all good" or "all bad"?

2. Did you react as if you were detached from personally relevant issues?

3. Did you develop somatic symptoms, such as headache, stomach pain, or the loss of ability to do something, in response to emotional situations?

4. Did you offer physical or psychological help to others in need?

5. Did you have repetitive or serial daydreams to which you retreated in lieu of real life?

6. Did you think about how you would handle difficulties that you might expect in the future?

7. Did you feel as if there was nothing positive or redeeming about yourself?

8. Did you have an attitude of giving much more than you received without perceiving the imbalance?

9. Did you ask for physical or emotional support while doing your best to handle the problem?

10. Did you try to diffuse the tension by engaging in creative activities?

11. Did you have an attitude of suspiciousness or perceive others as untrustworthy, unfaithful, or manipulative?

12. Did you make humorous comments about challenging personal issues or stressful situations?

13. Did you reflect upon your emotional experiences and personal thoughts?

14. Did you try to take your anger out on yourself or express it with self-harming behaviors?

15. Did you justify or give plausible explanations to cover up the real reasons for personal problems or stressful situations?

16. Did you take an active role in solving problems that arose?

17. Did you idealize yourself or others for their personal characteristics?

18. Did you consciously or unconsciously try to irritate someone in indirect or annoying ways?

19. Did you temporarily put aside your personal needs to deal with other things that needed to be done?

20. Did you focus on minor or unrelated matters that distracted you away from a problem that makes you anxious?

21. Did you discuss an emotional topic in general or impersonal way, without considering or experiencing your feelings?

22. Did you complain about how others don't understand you or don't really care?

23. Did you experience strong feelings towards someone, thinking that the other person intended to make you feel that way?

24. Did you feel confused, "spaced out", or unable to talk about a distressing topic?

25. Did you engage in verbal or physical fights?

26. Did you have trouble remembering simple things?

27. Did you avoid thinking about personal problems or feelings?

28. Did you perceive yourself as very strong, powerful, untouchable?

29. Did you have contradictory or conflictual ideas about a topic that makes you anxious? (example, on the one hand, on the other hand)

30. Did you devalue yourself or others for their personal characteristics?

Appendix C

Prosociality Scale

The following statements describe a large number of common situations. There are no right or wrong answers; the best answer is the immediate, spontaneous one. Read each phrase carefully and fill in the number that reflects your first reaction.

1. I am pleased to help my friends/colleagues in their activities.

2. I share the things that I have with my friends.

3. I try to help others.

4. I am available for volunteer activities to help those who are in need.

5. I am empathic with those who are in need.

6. I help immediately those who are in need.

7. I do what I can to help others avoid getting into trouble.

8. I intensely feel what others feel

9. I am willing to make my knowledge and abilities available to others

10. I try to console those who are sad.

11. I easily lend money or other things

12. I easily put myself in the shoes of those who are in discomfort

13. I try to be close to and take care of those who are in need

14. I easily share with friends any good opportunity that comes to me

15. I spend time with those friends who feel lonely

16. I immediately sense my friends' discomfort even when it is not directly communicated to me.