Running head: NEWS EXPOSURE, PSYCHOLOGICAL CAPITAL, AND STRESS

Does News Media's negative Nature lead to heightened Stress Levels via PsyCap depletion? Associating News Exposure, Psychological Capital, and Stress

Niklas Schmitt

Department of Positive Psychology and Technology, University of Twente

201300125: Bachelor's Thesis PPT

First Supervisor: Drs. N. Keesmekers

Second Supervisor: Dr. P. Gül

June 2020

Abstract

Increasing amounts of research are attesting most of news media a negativity biased content and framing. The aim of this study was to investigate whether exposure to news media increases stress levels by lowering levels of stress-buffering psychological capital. Subsequently, it was hypothesized that PsyCap mediates the relationship between news exposure and stress. The sub-hypotheses under investigation were news exposure to be associated with decreases in PsyCap and increases in stress, while high PsyCap was expected to be associated with low stress levels. A correlational survey design was employed. The sample (n = 157) had an age range of 16 - 88 years old (M = 32) and was skewed towards female participants (63%). The survey was conducted online, and mediation analysis was conducted using the PROCESS macro for SPSS. News exposure was found to neither affect PsyCap nor stress levels within this sample, and a mediating function of PsyCap was not supported. Yet, PsyCap demonstrated a negative relationship with stress as expected. While harmful effects of news exposure on stress levels or PsyCap could not be demonstrated, additional support for the stress-buffering function of PsyCap was obtained, extending its beneficial effects toward the non-occupational context.

Introduction

Americans spend an average of 70 minutes per day on news consumption, using mediums such as the Tv, radio, newspaper or the internet (Waldman, 2011); that is more time than citizens of the USA averagely spend with eating and drinking per day (Statista, 2018). Considering the amount of lifetime we sacrifice for being informed about what is going on in the world, investigating possibly adverse effects of news consumption is compelling. Learning about positive developments such as improvements in cancer treatment or a rising economy might not particularly give rise to being harmful. The fact that positive messages are rather scarce, however, as negativity dominates within the news landscape induces a more critical view on news consumption (Soroka & McAdams, 2015).

Being regularly exposed to discouraging information such as misleading politicians or potential risks of the climate change might have depleting effects on psychological resources such as hope and optimism. Two elements to consider point in this direction: first, both hope and optimism have been found to be negatively related to anxiety and depression, meaning that high anxiety is associated with low levels of hope (Alarcon, Bowling & Khazon, 2013). Considering the focus of the news media on hazards, crime, and other concerning issues, and the accompanied rise in public discussions about fear and fearful events point towards an association between news exposure and reduced hope (Altheide, 1997). Secondly, a study by McNaughton-Cassill and Smith (2002) points in a similar direction, as they found some relation between television news exposure and lowered optimism regarding the state of the world.

As a result of depletion, less psychological resources would be available to cope with stressors in life, possibly resulting in increased vulnerability to stress and eventually heightened stress levels (Avey, Luthans, & Jensen, 2009). The magnitude of this possibility becomes apparent when looking at multiple studies finding stress to seriously impede health and wellbeing (Schönfeld, Brailovskaia, Zhang & Margraf, 2018). Thus, a pathway is outlined for news consumption – generally viewed as desirable and indispensable in our society - possibly having long-lasting impacts on our lives.

Negativity Bias in Consuming and Creating News Media

When considering the mechanisms of news exposure, it is helpful to shortly examine the cognitive and emotional processes that influence news selection and processing. The reason is that these exact processes seem to be subject to a general tendency, namely the negativity bias (Lang,

Park, Sanders-Jackson, Wilson & Wang, 2007). Rozin and Royzman (2001) investigated the negativity bias and found multiple manifestations: negativity usually outweighs positivity in strength of activation, its activation grows more quickly, and is expressed more distinctively. This applies to various domains such as attention, empathy, and impression formation. Several other studies support the notion of a negativity bias substantially influencing our cognitions and emotions (Cacioppo, Gardner & Berntson, 1997; Ito & Cacioppo, 2005; Gollan et al., 2016); even three-month-old infants seem to be inclined to react stronger to negative than to positive information in their evaluations of others' social behaviour, demonstrating the bias's magnitude (Hamlin, Wynn & Bloom, 2010).

This fundamental inclination to negative stimuli also seems to be applicable to consumers' selection of news, according to recent studies. Knobloch-Westerwick, Mothes and Polavin (2020) for example investigated this phenomenon within the context of political information. They found their participants to exhibit a significant preference for negative news regarding their own country than for positive news. Similar results come from Bachleda et al. (2020), who found some trait-like consistencies of this phenomenon in the context of news selection. Further, the bias seems to extend beyond the selection of news to the evaluation as well. Soroka and McAdams (2015) examined exactly that, finding striking evidence for stronger and more extended reactions in response to negative news footage than to positive news by their participants.

In addition to the consumers, creators of news media also have their share in negative news intake to prevail. Soroka and McAdams (2015) attribute some responsibility to the journalists who decide on the content of news media. The authors describe both intentional and unintentional processes: the aware decision for negative content to elicit strong reactions and increase ratings, and them being subject to the negativity bias as well, unconsciously focusing on adverse reports.

Yet, the content is not the sole carrier of negativity. Researchers have observed the emergence of a "problem-frame" within the news media, captured in other operationalizations as "level of negative tone" (Lengauer, Esser & Bergenza, 2011, p. 196). This refers to how the content is arranged and transmitted to the viewer, such as the choice of sensational or fear-evoking words. Both content and framing decisions by news creators contribute to the systematic issue of prevailing negative news, which conceivably constitutes a problem considering the possible downsides.

Consequences of Exposure to Negative News

4

Altheide (1997) discusses the consequences of increasing negativity in news media, mainly characterized by increased discourses about fear and fearful topics in the public. Other authors support this notion. Partington (2013) for example discusses literature about the framing power of the media contributing to unreasonable fear of crime by focusing on dramatic and thrilling offender stories. Other consequences of prevailing negativity in news media can be found in the paper by de Hoog and Verboon (2020), who found news exposure to negatively influence participants' affective states. Yet, they could not find support for their explanatory approach of proposing moderators such as neuroticism or extraversion.

A study that suggests a more promising explanation comes from McNaughton-Cassill and Smith (2002). Besides fear evoking effects, they uncovered first evidence for television news exposure to decrease optimism. Participants were found to rate the condition of the world consistently worse than the state of their own community as a result of receiving information about the world solely through news media. Personal experiences within their own community, on the other hand, allowed for a more balanced view. Eventually, McNaughton-Cassil and Smith (2002) conclude with increased stress levels as one possible result of news consumption, prompting the idea of optimism as a possible mediator.

Establishing a connection between stress and optimism in this context seems promising in light of stress research: optimism is one key feature of the recently developed construct named Psychological Capital (PsyCap in the following), and research mainly investigated PsyCap's effect on stress (Luthans, Youssef-Morgan & Avolio, 2007).

Psychological Capital

Despite research about PsyCap often involving aspects of stress, its focus is not on pathology: the opposite is true, as the origins spring from the field of positive psychology (Luthans et al., 2007). PsyCap comprises four human resources: optimism, characterized by a tendency to attribute "positive events to personal, permanent, and pervasive causes" (Luthans et al., 2007, s.90-91) while doing the opposite for negative events; hope, in this context best described as a feeling of having the required energy and knowing about the required ways to spend that energy to reach certain goals; self-efficacy, another term for the confidence one has to accomplish objectives and successfully carry out certain tasks; and resilience, the ability and willpower to get back up and refocus one's efforts after setbacks (see also Luthans et al., 2007).

These concepts imply an applicability to multiple facets of life; however, PsyCap originated

from the study of positive organisational behaviour, with an emphasis on enhancing employees' success and wellbeing at the workplace. Avey, Luthans, Smith and Palmer (2010) for example showed that PsyCap acts as a resource and enhances employees' wellbeing, while Peterson, Luthans, Avolio, Walumbwa and Zhang (2011) discovered a causal relationship between PsyCap and employee performance. Others support PsyCap's beneficiary effects; especially having it acting as a buffer against stress is a recurring theme across literature (Avey et al., 2009; Newman, Ucbasaran, Zhu & Hirst, 2014). Yet, despite these studies showing promising results, the focus are individuals in the context of their occupation, making their findings difficult to apply to other life areas.

Non-Occupational Benefits of Psychological Capital

However, promising attempts to extend the scope of psychological capital to outside the workplace are on the rise. Culbertson, Fullagar and Mills (2010) made strides in that regard by demonstrating how PsyCap expanded towards a more general life satisfaction by increasing work functioning and satisfaction. Youssef-Morgan and Luthans (2015) became much more specific by subdividing PsyCap into three domains of life: work, health, and relationships. They tested and successfully proved the positive impact each domain's level of PsyCap has on the domain's level of satisfaction, including objective outcomes. Further, they showed how each life domain contributed to the overall wellbeing. Others found similar results, for instance discovering correlations of happiness with optimism and hope (Alarcon et al., 2013).

Regarding PsyCap's stress buffering effects, only few studies tested this function outside the workplace – for instance, college students seem to benefit from this buffering effect as well (Riolli, Savicki & Richards, 2012). Yet, the interweaving of stress and PsyCap is also demonstrated in the definition of stress: the stress level describes how an individual is able to use cognitive, emotional or physical resources to cope with some form of demand, implying that reduced resources make one more vulnerable to experience stress (Goodheart, Clopton & Robert-McComb, 2000). But why is it important to have enough resources at one's disposal to protect against stress?

Consequences of Heightened Stress-Levels

The literature is rich in studies attributing harmful outcomes from heightened daily stress levels, supporting the urgency to conduct further research. While some of them are manifested psychologically, including symptoms of depression, anxiety, and a less positive mentality, physical health can be affected as well (Schönfeld et al., 2018). Despite individual differences among their

participants' reactivity, DeLongis, Folkman and Lazarus (1988) found a significant association of daily stress with physical complaints, such as aches and illnesses. Also, long-term health consequences of daily stress are reported, often appearing not until later in life (Piazza, Stawksi, & Sheffler, 2018).

One possible explanation could come from Dalton and Hammen (2018): they found an association of daily stress and maladaptive health behaviours in college students, possibly adding a behavioural component to the adverse effects of stress. Participants exhibited more behaviours such as alcohol intake, smoking, fat intake, and exercise avoidance, among others, when daily stress levels were high. This might have great implications, as such behaviours are amongst the most prominent causes for self-inflicted diseases and deaths in western countries (Morrison & Bennett, 2016). Associating these maladaptive health behaviours and their serious consequences with daily stress further emphasises the importance of finding possible stress sources. In this paper, it is investigated whether news exposure indirectly heightens stress levels by decreasing the mediator PsyCap, a construct known to buffer against stress.

Summary

While a lot of research exists about the stress buffering effects of PsyCap in the occupational field, little is known about the utility of such resources in other life domains. Thus, investigating the effects of news exposure on PsyCap might give further insights into how PsyCap affects individuals' private lives, while examining possible adverse effects of news consumption as well. If news exposure would indeed deplete psychological capital and make individuals more vulnerable to stress responses, the consequences could be serious, as daily stress seems to entail long-lasting impacts on health and wellbeing. This demonstrates the importance of fostering and protecting such stress buffering resources. Considering the amount of exposure to the news media that is usual and the preliminary indicators of media consumption depleting parts of PsyCap, a more thorough investigation of the effects of news media on PsyCap seems indispensable. Thus, news exposure is proposed to be the independent variable, acting on the mediator psychological capital to eventually influence stress levels by decreasing resources to buffer against stress. Therefore, the hypotheses of the current paper are:

H1: News exposure will exhibit a positive effect on perceived stress levels.

H2: News exposure will exhibit a negative effect on psychological capital.

H3: Psychological capital will exhibit a negative effect on perceived stress levels.

H4: Psychological capital mediates the relationship between news exposure and stress levels.

Methods

Design

In the current study, a correlational survey design was employed. The variables that were related to each other were the amount of news media exposure, the stress levels, and the level of psychological capital, while the latter was tested to be a mediator variable. News exposure was treated as the independent variable and stress as the dependent variable.

Participants

The participants were recruited via a mixed process that included convenience sampling, snowball sampling and voluntary sampling. Social networking sites were used to spread the survey, as well as SONA systems (www.sona-systems.com). SONA is a survey distribution system used by the University of Twente where students can sign up for studies to reach a required amount of credits. For this survey, 0.25 credits were rewarded per SONA participant. Outside of SONA, no rewards were given to participants. Participants were also asked to further distribute the survey.

The original sample (N = 188) had to be adjusted due to missing values or ceiling effects. The eventual sample (n = 157) had an age range from 16-88 years old with a mean age of 32 years old (SD = 16,50). Due to the sampling within the researchers' personal environment, 51% of the sample was 23 years old or below. Additionally, the survey had more female (63%) than male participants. The sample was predominantly German (n = 136), with some Dutch participants (n =10) and the rest spread out about other nationalities (n = 11). Apparently, the sample had a high educational background, as only 8% (n = 13) of the participants had an educational level below the German Abitur. Thus, despite a satisfactory number of participants, the sample was skewed towards female, young, and highly educated participants.

Materials

The survey was set up with Qualtrics (www.qualtrics.com) to be conducted online, being available in both English and German. It first assessed demographics of the participants, namely the gender, the age, the nationality and the highest completed level of education. Further, multiple scales were used as the survey was part of a group-based data collection with varying research aims. The order of the scales was randomized to ensure a random distribution of non-responses or attentional deficits near the end of the survey. In the following, it will only be elaborated on the measures used for the current paper.

For the assessment of news exposure, a question was employed from the *Digital News Report 2019* which was conducted by the Reuters Institute to investigate news consumption in various countries (Newman, Fletcher, Kalogeropoulos & Nielsen, 2019). The question asked for the amount of news consumption, with a possible score of one to ten. The highest score (ten) was labelled "more than ten times a day", followed by labels such as "once a day", "four to six days a week", or "less often than once a month". The lowest possible score (one) was labelled "never". For the German version, the item was translated to German in a way that the back translation by English mother tongues was equal to the original item to ensure their reliability. Data about reliability or validity were not available at the time of the study.

To assess psychological capital, the Compound Psychological Capital Scale was used in both languages as obtained from the developers (Lorenz, Beer, Pütz, & Heinitz, 2016). The German version exhibits a good external validity, as the authors relate the CPC-12 to multiple other measurements of similar constructs with moderate to high correlations. The fact that the correlations are generally higher for non-occupational constructs is intriguing, as it is in line with this paper's study context of news exposure. Items such as "It is okay if there are people who do not like me" or "I am looking forward to the life ahead of me" demonstrated the extended applicability of the scale to the whole life, not merely to the working place. That made the CPC-12 a better fit than the often employed PCQ-24 and should have enhanced the survey's accuracy (Luthans et al., 2007). Further, the German CPC-12 has a high internal reliability with a Cronbach's α of .81, which was also the case in this study ($\alpha = .84$). For the English version of the CPC-12, no psychometric data were available at the time of this study. The maximum score was six ("strongly agree"), while the minimum score was one ("strongly disagree").

The Perceived Stress Scale was used to investigate the participants' stress levels. The English version was obtained for free from Mind Garden (www.mindgarden.com), as it has well established psychometric properties (Cohen, Kamarck & Mermelstein, 1983). Lee (2012) reviewed studies employing the PSS and found the 10-item version to be the most reliable one. All twelve studies employing the 10-item version of the PSS indicated a Cronbach's α of at least .70. The same goes for the test-retest reliability in the four studies it was assessed. Within this study, Cronbach's α was found to be very good as well ($\alpha = .83$). Even though the PSS only displayed moderate validity depending on the study reviewed, the 10-item version overall had better

psychometric properties than both the 4-item and the 14-item versions, supporting its employment (Lee, 2012).

A validated German version was received from Klein et al. (2016). They tested the psychometric properties of the German version in a German sample, finding good internal reliability ($\alpha = .84$). Regarding the validity, the German PSS was found to have a high correlation with depression and anxiety (r = .59 for both), similar to the English version (Lee, 2012). Another similarity to the English version were the results of the factor analysis of the German translation, which indicated a two-factor model, $\chi 2$ (32, N = 2463) = 417.8, p < .001 (Klein et al., 2016). The possible scores of the PSS ranged from one ("never") to five ("very often").

Procedures

The survey was solely conducted online, as the link to the survey was spread via social networks and SONA systems (www.sona-systems.com). When opening the survey, the participants were informed about the aims of the study, as well as the confidential and anonymous nature of the data collection. After agreeing to be above 16 years old, participants had to give their consent to participate and were directed to the demographic questions afterwards, followed by the scales and a short debrief at the end.

Data Analysis

Before conducting analysis, the coding of the items 4,5,7 and 8 of the PSS was reversed, as high scores on these items originally indicate a buffer to stress and not perceived stress. Then, the eventual data set was determined according to the exclusion criteria. To allow for that and explore the data, descriptive statistics about the items such as mean and standard deviations were obtained. Cases were excluded if floor or ceiling effects were apparent, or data were missing. Reliability of both the CPC-12 and the PSS was assessed by obtaining Cronbach's α . To investigate the dimensionalities, an Exploratory Factor Analysis was run with a maximum likelihood extraction method.

Subsequently, a mediation analysis was conducted via the PROCESS macro for SPSS (Version 3.4; Hayes, 2017). The mediation model constituting the output with *news exposure* = IV, PsyCap = MV, and stress = DV allowed to answer all four hypotheses. To indicate a mediation, the effect of *news exposure* on *stress* should disappear when the mediator PsyCap is included in the model (Baron & Kenny, 1986). The model was tested for significance via the F-test, while the significance of each effect was tested with the t-test.

Results

Descriptive statistics were obtained for each variable, as shown in Table 1. The item asking for *news exposure* seemed to exhibit a ceiling effect, as 76,3% in the current sample scored with an 8 or higher on a 10-point scale.

Table 1

Variable	п	М	SD	
NewsExposure	157	7,94	1,55	
Stress	157	2,83	0,58	
PsyCap	157	4,52	0,60	

Means and Standard Deviations on the Measures of News Exposure, Stress, and Psychological Capital.

Note. The maximum scores for News Exposure, Stress, and PsyCap were 10, 5, and 6, respectively, with a minimum score of 1 for each.

An Exploratory Factor Analysis was run for both scales to investigate their dimensionalities by determining underlying factors with a maximum likelihood extraction method. With the CPC-12, two factors were found to have an Eigenvalue of > 1, accounting for 54% of the total variance. As the CPC-12 consists of multiple items from five different scales, having one factor accounting for 38% of the variance is solid when trying to capture the construct of Psychological Capital. The Bartlett's test for sphericity showed significant results, χ^2 (66) = 694,43, p < .001, while the results of the Kaiser-Mayer-Olkin measure of sampling adequacy were good (*KMO* = .84).

For the PSS, two factors were found to have an Eigenvalue of > 1 as well, accounting for 53% of the total variance. In contrast, the scree plot rather suggests a one-factor solution (see *Figure 1*). However, the two-factor solution is in line with other studies using the PSS, thus no items were excluded (Klein et al., 2016). Bartlett's test for sphericity was again found to be significant within this sample, χ^2 (45) = 483,72, *p* < .001, with another good result of the Kaiser-Mayer-Olkin measure (*KMO* = .83).



Figure 1. Scree plot of the EFA for the PSS, depicting the Eigenvalue on the Y-axis and the component number on the X-axis.

To investigate whether *PsyCap* does mediate a possible effect of *news exposure* on *stress*, the PROCESS macro for SPSS was used. The first hypothesis suggested the IV *news exposure* to predict the DV *stress*. The results were not significant, F(1, 155) = .16, p = .69, $R^2 = .03$, with a coefficient close to zero, b = -.01, t(155) = -.40. The second hypothesis proposed *news exposure* to negatively predict the mediator *PsyCap*. The results were not significant as well, F(1, 155) = 1,04, p = .31, $R^2 = .01$, and the coefficient predicted an even slightly positive effect of *news exposure* on *PsyCap*, if any, b = .03, t(155) = 1,02. Regarding the third hypothesis of *PsyCap* negatively predicting *stress*, significant results were obtained, F(1, 155) = 80,52, p < .001, with the predicted negative effect, b = -.56, t(154) = -.8,94.

Concerning the last hypothesis of *PsyCap* mediating the effect of *news exposure* on *stress*, results indicated that *PsyCap* and *news exposure* together do significantly predict *stress*, F(2, 154) = 40,04, p < .001, $R^2 = .34$. Apparently, this was due to the relationship of *PsyCap* with *stress*, b = -.56, t(154) = -.8,94, p < .001, rather than *news exposure* with *stress*, b = .01, t(154) = .24, p = .81. The indirect effect of *news exposure* on *stress* was found to be not significant, b = -.02, 95% CIs [-.05, .01].

Discussion

Hypothesis 1

The first hypothesis of news exposure influencing stress levels could not be confirmed in this paper and thus must be rejected. The results reveal that no significant relationship exists between both variables within this sample. These findings call further research investigating effects of news exposure into question. However, contrasting results exist as well, like those from Holman, Garfin and Silver (2013). They investigated the effects of being exposed to news coverage about a recent terrorist attack, the Boston Marathon bombings. They found striking evidence that exposure to this type of coverage generated strong acute stress responses. If daily exposure was as high as six hours within a week after the event, the stress response was even stronger than for those directly affected, such as being present during the bombings.

However, studies finding such compelling evidence are rare up to this point. Deal et al. (2018) for example were not able to find a psychological nor a physiological stress response in older adults being exposed to Television news. Yet, the amount of news exposure was limited to 40 minutes before stress measurement in that study, implying that the amount of exposure might be an important variable. This suggests to shortly address incidental news exposure.

It describes the process of coming across and accessing news without the initial intention to do so (Kligler-Vilenchik, Hermida, Valenzuela & Villi, 2020). Even though most researchers are investigating its effects within political contexts, it also seems to increase news exposure overall, for example by means of push notifications (Kim, Chen & de Zúñiga, 2013; Scharkow, Mangold, Stier & Breuer, 2020; Stroud, Peacock & Curry, 2019). If news exposure is indeed harmful, incidental news exposure could magnify these effects by increasing news intake.

Hypothesis 2

The fact that news exposure might increase stress levels has at least some support; the aim of this paper was to find a specific pathway - by employing PsyCap as a mediator - to explain this relationship and deliver further evidence. Yet, no significant association between news exposure and PsyCap could be found within this sample, as the second hypothesis must be rejected.

These results are contrary to the study by McNaughton-Cassill and Smith (2002), which pointed in the direction of news exposure possibly affecting resources such as optimism. However, the authors did not assess PsyCap as a whole but rather participants' optimism about the state of the world. The difference in constructs measured might be one explanation for the different findings. Similar results are rare, as the non-occupational context of PsyCap has received little attention by researches until this point, especially in connection with news exposure.

However, more general results regarding well-being come from de Hoog and Verboon (2020). Being concerned with people's happiness, the authors found news perceived as negative to cause negative affective states in participants exposed to them. When considering the earlier discussed negativity bias in news media, this seems even more noteworthy. That is, if adverse news cause negative emotional states and most of the news coverage is dominated by negativity, being exposed to news could pose a legitimate threat to an individual's well-being.

Hypothesis 3

The third hypothesis stating that high scores in PsyCap will be associated with low stress levels was accepted considering the results. While a connection with news exposure could not be established in this paper, it extends the relationship of PsyCap and stress to the non-occupational setting.

As discussed earlier, the stress buffering effects of PsyCap were strongly researched regarding the working place (Avey et al., 2010; Avey et al., 2009). But little is known whether high levels of PsyCap might also protect against daily stressors not restricted to the occupation. The results of this paper shed some light on that, as stress levels were assessed in general. The same goes for PsyCap, as the items of the CPC-12 do not refer to one's employment (as opposed to other PsyCap measures) but are rather applicable to the whole life. The fact that both measures were clearly not restricted to the occupation and the scores obtained were still negatively correlated is noteworthy when trying to extend PsyCap's domains of application and its usefulness.

Hypothesis 4

The fourth hypothesis of PsyCap mediating the relationship between news exposure and stress must apparently be rejected. Firstly, news exposure was not found to influence stress levels, thus no relationship could be mediated. And secondly, news exposure was found to not influence PsyCap within this study. The fact that stress and PsyCap were associated as expected points to news exposure as being the non-fit in the mediation model. This means that either news exposure has indeed no influence on PsyCap nor on stress levels, or that the assessment of news exposure was flawed, or both. It is not within the scope of this paper to answer that question; despite an apparent ceiling effect for the news exposure item on the one hand, only few studies exist attesting news exposure to be a direct stress cause on the other hand (Holman et al., 2013).

Nonetheless, if the relationship is supported by more evidence, looking into PsyCap as a mediator still makes sense, as its function in the stress mechanism is evident (Avey et al., 2009). Other variables might also exist as to how and when - if at all - news exposure might have detrimental effects. One example is mentioned and investigated by de Hoog and Verboon (2020). They found personal relevance of news to be an important moderator in exposure influencing affective states; yet, this rather gives answers to why news influence individuals and not how.

General Implications

Despite the lack of findings in this paper, multiple studies attest news exposure a negative influence on an individual's wellbeing in various forms. If these findings are accurate, could the solution be avoidance of news media at the cost of not being informed and aware about the state of the world?

That seems not feasible nor possible nowadays considering the growth of incidental news exposure. A more realistic approach comes from Partington (2013). After discussing how the pessimistic and sensational news coverage can induce fear, he proposes a turnaround in media coverage focusing on broader, societal aspects of the justice system. An example would be to not present the offense itself in each detail, but rather discuss how to reintegrate the offender into society. Yet, this seems contrary to what Boukes and Vliegenthart (2017) discovered. They found news that focus on societal aspects of the crime such as social antecedents to negatively influence mental wellbeing. Broadcasts covering mainly the individual offense itself were viewed as rather being entertaining, accompanied by beneficial effects on mental wellbeing. While these authors propose contrasting approaches, very different suggestions exist as well. As they view appraisal processes as a main pathway for the effects of news consumption, de Hoog and Verboon (2020) have a different advice: instead of stressing details related to the crime or the offender, news media should demonstrate how viewers should cope with the facts presented to them. By that, people would appraise news differently and might become empowered to reduce its effects.

While harmful effects of news exposure could not be confirmed in this study, the protective function of PsyCap against stress in non-occupational settings was confirmed and is in line with previous results (Avey et al., 2009). This however seems to be only useful if it is possible to increase these resources to help people cope more effectively with daily stressors, which seems to be the case. Luthans, Avey, Avolio, Norman and Combs (2006) demonstrated how interventions aimed at increasing each of the four resources can successfully be implemented and at least show

small increases in PsyCap. Luthans and Youssef-Morgan (2017) further worked on such interventions and gave a detailed description with specific activities on how to develop PsyCap. Yet, these interventions are restricted to the workplace context to enhance employee satisfaction and performance. Even though the authors mention that the positive effects of PsyCap enhancement may not be restricted to the occupation, a more private-life focused intervention is conceivable for those who suffer from low levels of optimism, hope, resilience or self-efficacy especially outside their profession (Luthans & Youssef-Morgan, 2017; Culbertson et al., 2010).

Limitations

Data collection was conducted during the peak of the CoViD-19 pandemic in Germany, as most of public life was suspended during that time span. Thus, people spend the majority of their time at home, which might have influenced variables that were assessed.

For example, staying at home most of the time allows for extensive news consumption, and receiving constant updates about the state of the world seems even more tempting during a pandemic. This could be one explanation for the high scores on the news exposure item in this sample. Unfortunately, no reference data is available about the news exposure scores to compare to non-pandemic contexts. Yet, recent papers suggest rises in and consequences from news exposure during CoViD-19 (Garfin, Silver & Holman, 2020; Buheji, Jahrami & Dhahi, 2020).

Regarding the pandemic's influence on assessed stress levels, both studies also address the emergence of heightened stress levels during pandemics. A literature review by Rajkumar (2020) about mental health during CoViD-19 points in a similar direction, reporting slight increases in psychological stress levels. The mean stress level in this study looked initially to be quite high compared to the paper that established the psychometric properties for the German PSS (Klein et al., 2016). On the other hand, studies with a sample similar to the current paper scored comparable results during non-pandemic times, questioning the effect CoViD-19 had on mean stress levels (Roberti, Harrington & Storch, 2006; Ramirez & Hernández, 2007).

Regarding the third variable PsyCap, it can only be speculated what effect a global pandemic has on resources such as optimism and hope, as research is lacking; yet, an effect is certainly conceivable regarding lack of diversion and social contacts.

Further, the fact that no significant results were obtained with news exposure as a variable questions the measurement of that variable; the apparent ceiling effect of the item supports this notion. A possible explanation for this effect was made by Vraga and Tully (2018). They compared

participants self-reported news exposure to their actual amount of exposure and found a significant difference. Participants constantly failed to accurately report their amount of news exposure, as observational data revealed significantly less exposure to news than self-reported by their participants.

Strengths

The sample exhibited a wide age range, capturing news exposure of participants as young as sixteen years old and as old as eighty-eight years old. This might be important considering the different news consuming behaviors of different age groups (Waldman, 2011).

The non-existence of a correlation involving news exposure seems noteworthy as well, given that participants' news exposure appeared to be quite high during data collection. This would have probably magnified a possible effect on stress or PsyCap. The same goes for the kind of news, as news media was dominated by devastating numbers of new infections and deaths due to CoViD-19. If consuming a lot of negative news influences PsyCap or stress, the studies' context would have rather magnified than diminished this effect, making the insignificant findings noteworthy.

Regarding the measurement instruments, despite most findings being not significant due to the variable of news exposure, stress levels and PsyCap seemed to be soundly measured. This is compelling as both the German version of the PSS and the CPC-12 were published in 2016 and thus have not experienced extensive utilization (Klein et al., 2016; Lorenz et al., 2016). Yet, both instruments exhibited good reliability and support for their established dimensionalities, making their future application reasonable.

Future Research

Considering the increasing amount of literature connecting news exposure to negative outcomes, continuing the research in this area makes sense. As discussed earlier, more accurate methods to capture the concept of news exposure might be employed such as collecting observational data. If, similar to this study, constraints do not allow the collection of behavioural data, improved self-report items could be used. Althaus and Tewksbury (2007) reviewed common media and news exposure measures and provide a helpful guide when designing items to capture news exposure. Further, this would allow to compare the data obtained with other results, as these items are more established measurements of news exposure.

Another suggestion is to look into what kind of news has particular effects. As no significant results were obtained with regard to news exposure in this paper, it might be possible that only

certain types of news induce a stress response. Thus, investigating and defining dimensions of news coverage and especially the effects on individuals could be subject for future research.

Conclusion

The aim of this study was to find support for the increasing amount of literature demonstrating harmful effects of negatively biased news media. However, the obtained data did not allow for such an interpretation. News exposure overall was very high but was not found to impact PsyCap nor stress levels within this sample. Nonetheless, additional support for the stress-buffering effects of PsyCap was found. This is especially compelling considering the little-researched non-occupational context in which PsyCap was assessed. This extends the implications PsyCap has for wellbeing and stress beyond the workplace and emphasizes the importance of future research in enhancing and applying the effects of PsyCap to various life domains.

References

- Alarcon, G. M., Bowling, N. A., & Khazon, S. (2013). Great expectations: a meta-analytic examination of optimism and hope. *Personality and Individual Differences*, 54(7), 821-827. https://doi.org/10.1016/j.paid.2012.12.004
- Althaus, S. L., & Tewksbury, D. H. (2007). *Toward a new generation of media use measures for the ANES*. Retrieved from website: https://www.researchgate.net/publication/265199906_Toward_a_New_Generation_of_M edia Use Measures for the ANES
- Altheide, D. (1997). The news media, the problem frame, and the production of fear. *The Sociological Quarterly*, 38(4), 647-668. Retrieved 2020, February 18, from www.jstor.org/stable/4121084
- Avey, J. B., Luthans, F., & Jensen, S. M. (2009). Psychological capital: a positive resource for combating employee stress and turnover. *Human Resource Management*, 48(5), 677-693. https://doi.org/10.1002/hrm.20294
- Avey, J. B., Luthans, F., Smith, R. M., & Palmer, N. F. (2010). Impact of positive psychological capital on employee well-being over time. *Journal of Occupational Health*, 15(1), 17-28. https://doi.org/10.1037/a0016998
- Bachleda, S., Neuner, F. G., Soroka, S., Guggenheim, L., Fournier, P., & Naurin, E. (2020). Individual-level differences in negativity biases in news selection. *Personality and Individual Differences*, 155, 109675. https://doi.org/10.1016/j.paid.2019.109675
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182. https://doi.org/10.1037/0022-3514.51.6.1173
- Boukes, M., & Vliegenthart, R. (2017). News consumption and its unpleasant side effects. *Journal* of Media Psychology, 29(3), 137-147. https://doi.org/10.1027/1864-1105/a000224
- Buheji, M., Jahrami, H., & Dhahi, A. S. (2020). Minimising stress exposure during pandemics similar to covid-19. *International Journal of Psychology and Behavioral Science*, 10(1), 9-16. https://doi.org/ 10.5923/j.ijpbs.20201001.02

- Cacioppo, J. T., Gardner, W. L., & Berntson, G. G. (1997). Beyond bipolar conceptualizations and measures: the case of attitudes and evaluative space. *Personality and Social Psychology Review*, 1(1), 3-25. https://doi.org/10.1207/s15327957pspr0101 2
- Cohen, S., Kamarck, T., & Mermeltsein, R. (1983). *Perceived Stress Scale* [Measurement instrument]. Retrieved from https://www.mindgarden.com/14-our-products
- Culbertson, S. S., Fullagar, C. J., & Mills, M. J. (2010). Feeling good and doing great: the relationship between psychological capital and well-being. *Journal of Occupational Health*, 15(4), 421-433. https://doi.org/10.1037/a0020720
- Dalton, E. D., & Hammen, C. L. (2018). Independent and relative effects of stress, depressive symptoms, and affect on college students' daily health behaviors. *Journal of Behavioral Medicine*, 41(6), 863-874. https://doi.org/10.1007/s10865-018-9945-4
- Deal, C., Bogdan, R., Miller, J. P., Rodebaugh, T., Caburnay, C., Yingling, M., ... Lenze, E. J. (2018). Effects of cable news watching on older adults' physiological and self-reported stress and cognitive function. *The International Journal of Aging and Human Development*, 87(2), 111-123. https://doi.org/10.1177/0091415017729684
- De Hoog, N., & Verboon, P. (2020). Is the news making us unhappy? The influence of daily news exposure on emotional states. *British Journal of Psychology*. https://doi.org/10.1111/bjop.12389
- DeLongis, A., Folkman, S., & Lazarus, R. S. (1988). The impact of daily stress on health and mood: psychological and social resources as mediators. *Journal of Personality and Social Psychology*, 54(3), 486-495. https://doi.org/10.1037//0022-3514.54.3.486
- Garfin, D. R., Silver, R. C., & Holman, E. A. (2020). The novel coronavirus (covid-2019) outbreak: amplification of public health consequences by media exposure. *Health Psychology*, 39(5), 355-357. http://dx.doi.org/10.1037/hea0000875
- Gollan, J. K., Hoxha, D., Hunnicutt-Ferguson, K., Norris, C. J., Rosebrook, L., Sankin, L., & Cacioppo, J. (2016). Twice the negativity bias and half the positivity offset: evaluative responses to emotional information in depression. *Journal of Behavior Therapy and Experimental Psychiatry*, 52, 166-170. https://doi.org/10.1016/j.jbtep.2015.09.005
- Goodheart, K., Clopton, J. R., & Robert-McComb, J. J. (2000). *Eating Disorders in Women and Children: Prevention, Stress Management, and Treatment.* CRC Press.

- Hamlin, J. K., Wynn, K., & Bloom, P. (2010). Three-month-olds show a negativity bias in their social evaluations. *Developmental Science*, 13(6), 923-929. https://doi.org/10.1111/j.1467-7687.2010.00951.x
- Hayes, A. F. (2017). Introduction to Mediation, Moderation, and Conditional Process Analysis [Computer Software]. New York: Guilford Press.
- Holman, E. A., Garfin, D. R., & Silver, R. C. (2013). Media's role in broadcasting acute stress following the Boston marathon bombings. *Proceedings of the National Academy of Sciences of the United States of America*, 111(1), 93-98. https://doi.org/10.1073/pnas.1316265110
- Ito, T., & Cacioppo, J. (2005). Variations on a human universal: individual differences in positivity offset and negativity bias. *Cognition & Emotion*, 19(1), 1-26. https://doi.org/10.1080/02699930441000120
- Kim, Y., Chen, H.-T., de Zúñiga, H. G. (2013). Stumbling upon news on the internet: effects of incidental news exposure and relative entertainment use on political engagement. *Computers in Human Behavior, 29*(6), 2607-2614. http://dx.doi.org/10.1016/j.chb.2013.06.005
- Klein, E. M., Brähler, E., Dreier, M., Reinecke, L., Müller, K. W., Schmutzer, G., ... Beutel, M. E. (2016). The German version of the perceived stress scale psychometric characteristics in a representative German community sample. *BMC Psychiatry*, 16(159). https://doi.org/10.1186/s12888-016-0875-9
- Kligler-Vilenchik, N., Hermida, A., Valenzuela, S., & Villi, M. (2020). Studying incidental news: antecedents, dynamics and implications. *Journalism*, 1-6. https://doi.org/10.1177/1464884920915372
- Knobloch-Westerwick, S., Mothes, C., & Polavin, N. (2020). Confirmation bias, ingroup bias, and negativity bias in selective exposure to political information. *Communication Research*, 47(1), 104-124. https://doi.org/10.1177%2F0093650217719596
- Lang, A., Park, B., Sanders-Jackson, A. N., Wilson, B. D., & Wang, Z. (2007). Cognition and emotion in tv message processing: how valence, arousing content, structural complexity, and information density affect the availability of cognitive resources. *Media Psychology*, 10(3), 317-338. https://doi.org/10.1080/15213260701532880

- Lee, E.-H. (2012). Review of the psychometric evidence of the perceived stress scale. Asian Nursing Research, 6(4), 121-127. https://doi.org/10.1016/j.anr.2012.08.004
- Lengenauer, G., Esser, F., & Bergenza, R. (2011). Negativity in political news: a review of concepts, operationalizations and key findings. *Journalism*, 13(2), 179-202. https://doi.org/10.1177%2F1464884911427800
- Lorenz, T., Beer, C., Pütz, J., & Heinitz, K. (2016). Measuring psychological capital: construction and validation of the compound psycap scale (cpc-12). *PLoS ONE, 11*(4). https://doi.org/10.1317/journal.pone.0152892
- Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: toward a micro-intervention. *Journal of Organizational Behavior*, 27(3), 387-393. https://doi.org/10.1002/job.373
- Luthans, F., & Youssef-Morgan, C. M. (2017). Psychological capital: an evidence-based positive approach. *Annual Review of Organizational Psychology and Organizational Behavior*, 4(17), 1-17. https://doi.org/10.1146/annurev-orgpsych-032516-113324
- Luthans, F., Youssef-Morgan, C. M., & Avolio, B. J. (2007). *Psychological Capital: Developing the Human Competitive Edge*. New York: Oxford University Press.
- 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
- Mind Garden. (n.d.). *Perceived stress scale*. [Measurement instrument]. Retrieved from https://www.mindgarden.com/14-our-products 020,
- Morrison, V., & Bennett, P. (2016). Introduction to Health Psychology (4th ed.). Harlow, UK: Pearson.
- Newman, N., Fletcher, R., Kalogeropoulos, A., & Nielsen, R. K. (2019). *Digital news report 2019*. Retrieved from Reuters Institute website: http://www.digitalnewsreport.org/
- Newman, A., Ucbasaran, D., Zhu, F., & Hirst, G. (2014). Psychological capital: a meta review and synthesis. *Journal of Organizational Behavior*, 35(S1), 120-138. https://doi.org/10.1002/job.1916
- Partington, N. (2013). Fear of Crime: the impact of the media. Queen's Political Review, 1(1), 139-149. Retrieved2020,February10,https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=10&cad=rja&uac

t=8&ved=2ahUKEwiy6-TGl-

vnAhXLDuwKHQRQDZ0QFjAJegQIAxAB&url=https%3A%2F%2Fpdfs.semanticschol ar.org%2F70ab%2Fa803154a4470fa76fdd0b6a40074247a3eb8.pdf&usg=AOvVaw39Hl Xjzl17U7sqQGFUyTP-

- Peterson, S. J., Luthans, F., Avolio, B. J., Walumbwa, F. O., & Zhang, Z. (2011). Psychological capital and employee performance: a latent growth modelling approach. *Personnel Psychology*, 64(2), 427-450. https://doi.org/10.1111/j.1744-6570.2011.01215.x
- Piazza, J. R., Stawski, R. S., & Sheffler, J. L. (2018). Age, daily stress processes, and allostatic load: a longitudinal study. *Journal of Aging and Health*, 31(9), 1671-1691. https://doi.org/10.1177/0898264318788493
- Qualtrics. (n.d.). [Research instrument]. Retrieved from www.qualtrics.com
- Rajkumar, R. P. (2020). Covid-19 and mental health: a review of the existing literature. *Asian Journal of Psychiatry*, 52. https://doi.org/10.1016/j.ajp.2020.102066
- Ramirez, M. T. G., & Hernández, R. L. (2007). Factor structure of the perceived stress scale (PSS) in a sample from Mexico. *The Spanish Journal of Psychology*, 10(1), 199-206. https://doi.org/ 10.1017/S1138741600006466
- Riolli, L., Savicki, V., & Richards, J. (2012). Psychological capital as a buffer to student stress. *Psychology*, 3(12), 1202-1207. http://dx.doi.org/10.4236/psych.2012.312A178
- Roberti, J. W., Harrington, L. N., & Storch, E. A. (2006). Further psychometric support for the 10item version of the perceived stress scale. *Journal of College Counselling*, 9(2), 135-147. https://doi.org/10.1002/j.2161-1882.2006.tb00100.x
- Rozin, P., & Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review*, 5(4), 296-320. https://doi.org/10.1207/S15327957PSPR0504_2
- Scharkow, M., Mangold, F., Stier, S., & Breuer, J. (2020). How social network sites and other online intermediaries increase exposure to news. *Proceedings of the National Academy of Science of the United States of America*, 117(6), 2761-2763. https://doi.org/10.1073/pnas.1918279117
- Schönfeld, P., Brailovskaia, J., Zhang, X. C., & Margraf, J. (2018). Self-efficacy as a mechanism linking daily stress to mental health in students: a three-wave cross-lagged study. *Psychological Reports*, 122(6), 2074-2095. https://doi.org/10.1177/0033294118787496

Sona Systems. (n.d.). [Research instrument]. Retrieved from www.sona-systems.com

- Soroka, S., & McAdams, S. (2015). News, politics, and negativity. *Political Communication*, *32*(1), 1-22. https://doi.org/10.1080/10584609.2014.881942
- Statista. (2018). Where people spend the most time eating & drinking. Retrieved 2020, February 17, from https://www.statista.com/chart/13226/where-people-spend-the-most-time-eatingdrinking/
- Stroud, N. J., Peacock, C., & Curry, A. L. (2019). The effects of mobile push notifications on news consumption and learning. *Digital Journalism*, 8(1), 32-48. https://doi.org/10.1080/21670811.2019.1655462
- Vraga, E. K., & Tully, M. (2018). Who is exposed to news? It depends on how you measure: examining self-reported versus behavioural news exposure measures. *Social Science Computer Review*, 1-17. https://doi.org/10.1177/0894439318812050
- Waldman, S. (2011). *The information needs of communities*. Retrieved from Federal Communications Commission: www.fcc.gov/infoneedsreport
- Youssef-Morgan, C. M., & Luthans, F. (2015). Psychological capital and well-being. *Stress and Health*, 31(3), 180-188. https://doi.org/10.1002/smi.2623