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MEDIATING EFFECTS OF DISPOSITIONAL MINDFULNESS ON THE RELATIONSHIP BETWEEN NEUROTICISM, CONSCIENTIOUSNESS AND WORRIES, TENSION AND LACK OF JOY

ABSTRACT: The aim of the present research was to examine the mediating effects of Dispositional Mindfulness on the associations of the traits Neuroticism and Conscientiousness with Worries, Tension and (Lack of) Joy. The research sample consisted of participants from German-speaking general population (N=430; 73% females and 23% males) mean age $\bar{x}=39$, $\sigma=14.6$ (min=19, max=77). The scales demonstrated high reliability. The Conceptual Model 1.2 was structured on the following associations: a negative correlation between Dispositional Mindfulness and Neuroticism ($r=-0.64$; $p<.01$) positive correlation with Conscientiousness ($r=-0.41$; $p<.01$), and negative correlations with Worries ($r=-0.57$; $p<.01$), Tension ($r=-0.54$; $p<.01$), and (Lack of) Joy ($r=-0.62$; $p<.01$). The results of mediation analysis indicate powerful indirect effects of Dispositional Mindfulness in all of the tested relationships: between Neuroticism and Worries ($b=0.15$; $\beta=0.12$; $p<.001$, 95% Bca CI 0.091, 0.217), Neuroticism and Tension ($b=0.13$; $\beta=0.12$; $p<.001$, 95% Bca CI 0.077, 0.208), Neuroticism and (Lack of) Joy ($b=0.18$; $\beta=0.19$; $p<.001$, 95% Bca CI 0.124, 0.241), and Conscientiousness and (Lack of) Joy ($b=-0.10$; $\beta=-0.08$; $p<.001$, 95% Bca CI -0.096, -0.058). Empirical evidence supports the theoretical assumptions that Dispositional Mindfulness strongly influences personality traits in the context of cognitive, affective, and somatic difficulties, and stimulates insight into one's own behaviours and potential formation of functional responses.

KEY WORDS: Dispositional mindfulness, neuroticism, conscientiousness.

1. Introduction

Dispositional Mindfulness (Mindful attention and awareness) refers to a state of heightened awareness and attention in which an individual observes current internal and external changes (Brown, Ryan, & Creswell, 2007) during the present moment with a non-judgemental attitude (Marcel, 2003; Teasdale, 1999). Brown et al. (2007) state that mindfulness involves an individual briefly directing attention to the stimulus, before manifesting any cognitive or emotional reaction, without identifying with automatic cognitive schemes and associations that they have for a certain stimulus. Mindfulness is a receptive state of mind, in which an individual does not evaluate the object, but observes it as it is. Perceptual contact takes place openly and effortlessly, through exposure to internal and external stimuli, before “switching on” automatic thoughts and behaviours, which are influenced by experiential filters. Dispositional Mindfulness is characterized by increased flexibility, clarity of cognition and a “decentralized”, instead of a biased perspective. In contrast, automatic beliefs, attitudes, and emotions manifest as automatic behavioural, cognitive, emotional, and somatic reactions (Brown et al., 2007).

The mindfulness construct was theoretically reconceptualized in the early 2000s (Brown & Ryan, 2004; Baer, Smith & Allen, 2004). Initially, researchers conceptualized it as a skill or clinical intervention (Kabat-Zinn, 1994; 2011; Schmidt, 2011). Contemporary researchers conceptualize it as a stable trait represented in the general population (Brown & Ryan, 2004; Rau & Williams, 2015; 2016; Eisenlohr-Moul, Walsh, Charnigo, Lynam, & Baer, 2012; Kiken, Garland, Bluth, Palsson, & Gaylord, 2015). The body of literature highlights the significant role that mindfulness has in the impulsivity regulation and attention stability (Way, Creswell, Eisenberger, & Lieberman, 2006, qtd in Brown and et al., 2007; Siebelink, Asherson, Antonova, Bögels, Speckens, Buitelaar, & Greven, 2019) and affect in non-exercising (non-meditating) subjects (Brown, Goodman & Inzlicht, 2013; Zhuang, Bi, Li, Xia, Guo, Chen, Du, Wang, Wei, Yin, & Qiu, 2017; Creswell, Way, Eisenberger, & Lieberman, 2007; Prakash, De Leon, Klatt, Malarkey, & Patterson, 2013; Modinos, Ormel, & Aleman, 2010). In other words, individual differences on this dimension exist independently of the exercises practiced.

1.1. Dispositional Mindfulness and Psychological Functioning

The body of research examining the relationships of mental health constructs has shown that Dispositional Mindfulness is a major factor in the individual psychological functioning, as an affective regulation disposition (Brown & Ryan, 2006). The findings support the argument that respondents with high scores on this trait exhibit fewer automatic behavioural patterns and feel less conflicted regarding the expressed response (Brown, Ryan, & Creswell, 2007). Empirical research has shown that high scores on this dimension significantly predict the activity of brain regions that are in charge of performing tasks and maintaining attention and that are important for individual satisfaction (Brown, Ryan, & Creswell, 2007). There are two mechanisms which use mindfulness to achieve this (Shapiro, Carlson, Astin, & Freedman, 2006): *reperceiving*, or open observation of behaviour, where an individual can regulate their response before the need for experiential avoidance of the stimulus arises, which is a response typical for neuroticism. Depending on the context, automatic maladaptive responses and unpleasant emotions may become less prevalent in everyday functioning (see also Hayes, 2002). The discomforts can be observed by an individual with an attitude of open observation, without judgment, from the moment they appear until they disappear, without reacting. This can reduce the possibility of maladaptive responses that would reinforce the discomforts (e.g., rumination, psychoactive substance use, etc.). Cognition-wise, automatic processing is often accompanied by numerous biases that can limit the cognition of value-congruent responses important for fulfilling personal goals (Ryan, Kuhl & Deci, 1997). Non-judgmental observation of one's own experiences and consciously thought-out action can be a more functional alternative to rumination and deliberation. This helps a person to redirect attention to important sources of pleasure and to achieving positive reinforcements in life and can also reduce the likelihood of bias in making decisions in problem situations (Brown & Ryan, 2003). In the present research, Dispositional Mindfulness is operationalized as a disposition and a multidimensional construct defined by the Five Facet Mindfulness Questionnaire (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006), which, besides Awareness and Nonreact-

ing, which are theoretical and empirically closest to the essence of the construct (Rau & Williams, 2016), also contains the facets of Observing, Describing and Non-judging.

1.2. Neuroticism, Conscientiousness, and Psychological Dysfunctions

The dimension Dispositional Mindfulness was examined in relation to the Big Five personality dimensions relevant to psychological functioning (McCrae & Costa, 2008). For Neuroticism, associations are moderate and negative with Dispositional Mindfulness and each of its six facets ($r = -.45$; in a meta-analytic study by Giluk, 2009, qtd in Rau & Williams, 2016; Feltman, Robinson, & Ode 2009; Wenzel, Versen, Hirschmüller, & Kubiak 2015). There are not enough findings regarding the associations with Conscientiousness (Boyce, Wood and Brown, 2010; Giluk, 2009). Different longitudinal studies have proposed that neuroticism and conscientiousness correlate with individual health (Mroczek, Spiro, & Turiano, 2009; Friedman, 2019), symptomatic reactions to stress (Ervasti, Kallio, Määttänen, Mäntyjärvi, & Jokela 2019; Thalmayer, Friedman, Azocar, Harwood, & Ettner, 2017), having healthy habits (Joyner, Rhodes, & Loprinzi, 2018; Turiano, Hill, Graham, & Mroczek, 2018), life satisfaction (Szcześniak, Sopińska, & Kroplewski, 2019) and perceived self-efficacy (Wang, Yao, Liu, Yang, Wang & Wang, 2014). This supports the assumption that dispositions play an important role in the daily functioning of an individual (Salehinezhad, 2012). According to the theory of pathoplastic relationship (Widiger & Smith, 2008), behavioural, cognitive, and emotional tendencies of an individual can lead to impaired mental functioning and sometimes to a structured mental illness (Salehinezhad, 2012). An individual with a tendency to perceive the challenges in life as threatening, even the situations that potentially provide positive life reinforcement (e.g., a better job opportunity, moving to a more convenient location, etc.), can experience increased anxiety even where there is no threat. This can lead them to make wrong attributions, have unreal expectations and exhibit inappropriate behaviours (Rettew & McKee, 2005). Neuroticism contributes to

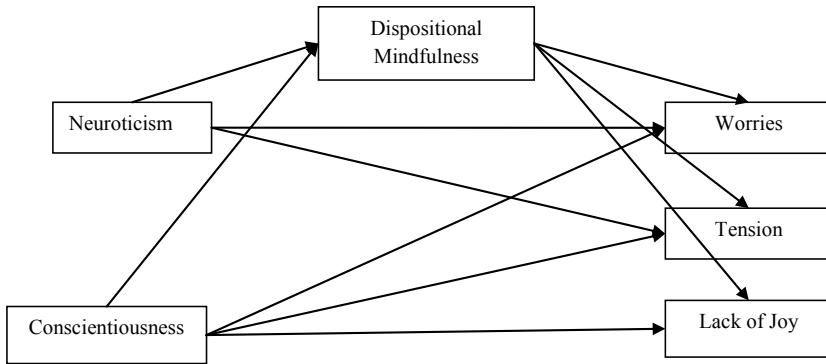
excitability, distress, avoidant behaviour, irrational perfectionist beliefs, low self-esteem, and negative bias (Salehinezhad, 2012). Neuroticism refers to individual capacity to react maladaptively to events in the environment and to their own experiences, depending on the context. It is most consistently associated with poor stress regulation (Shi, Liu, Wang, & Wang, 2015; Williams & Moroz, 2009; Lazarus & Folkman, 1984), anxiety symptoms (Jylhä & Isometsä, 2006), somatic difficulties (Neitzert, Davis, & Kennedy, 1997; Denovan, Dagnall, & Lofthouse, 2018), and rumination (Du Pont, Rhee, Corley, Hewitt, & Friedman, 2019). On the other hand, conscientiousness is a tendency towards a sense of purpose and fulfilment and is associated with high aspirations. It also involves diligence, caution, thoroughness, and a tendency towards long-term planning (Salehinezhad, 2012). Empirical findings indicate that the association between conscientiousness and personal well-being outcomes is less consistent (Steel, Smith, & Schultz, 2008; Boyce, Wood, & Brown, 2010). The meta-analysis by Boga and Roberts (2004) showed that conscientiousness positively correlates with health-related behaviours and helps overcome stress (Saeed, Oshio, Taku, & Hirano, 2018; Kotov, Gamez, Schmidt, & Watson 2010; Gartland, O'Connor, Lawton, & Ferguson, 2013). Other studies have claimed that it can lead to high negative affect (Carter, Guan, Maples, Williamson, & Miller, 2016; Pickett, Jennifer, Joeri, Jonas, & De Fruyt 2020; Fayard, Roberts, Robins, & Watson, 2012; Boyce, Wood, & Brown, 2010; Pickett et al., 2020). Further research is needed to understand this inconsistency and to determine which variables may explain the possible mechanism of the relationship between personality traits and psychological problems (Shi, Liu, Wang, & Wang, 2015; Miscel & Shoda, 2008; Rau & Williams, 2016). Tran, Wasserbauer & Voracek (2020) proposed that the facets of the above constructs can be associated with depressive affect and anxiety symptoms. However, the mechanisms of the mediating effects of mindfulness need to be investigated (Shapiro et al., 2006). Therefore, to understand these associations, it would be important to analyse the indirect effect of the complete aggregates: Neuroticism towards the symptoms of Worries, Tension and Lack of Joy via Dispositional Mindfulness. Although mindfulness protects against affective arousal (Rau & Williams, 2016), there are no known findings about the potential medi-

ating effects of these relationships, which constitutes a theoretical-empirical gap. Further research should address the inconsistent findings regarding the associations between Conscientiousness and stress-related problems, such as Worries, Tension, and Lack of Joy, as well as their relationship with Dispositional Mindfulness (Boyce, Wood, & Brown, 2010; Giluk, 2009). Lee-Baggley, Preece, & DeLongis (2005) stress that, although it was empirically proven that conscientiousness is a major factor in stress responses, the mechanisms of this interaction remain unknown. The research problem can be phrased as a question: Does Dispositional Mindfulness have substantial mediating effects on the associations of Neuroticism and Conscientiousness with Worries, Tension and Lack of Joy? These findings would complement the observations made by Tran, Wasserbauer, & Voracek (2020) about the substantial impact of Mindfulness, Neuroticism, and Conscientiousness in the context of psychological dysfunctions. The results would provide an answer to the theoretical dilemmas noted by Shapiro et al. (2006), Rau & Williams (2016) and Giluk (2009), and the associations of Conscientiousness with Worries, Tension and Lack of Joy would become clearer. Therefore, the research aims are: 1) to explore the mediating effects of Mindfulness in the associations between Neuroticism and Conscientiousness and Worries, Tension and Lack of Joy; 2) to examine the nature of the association between Conscientiousness and Worries, Tension and Lack of Joy; 3) to examine the association between Conscientiousness and Dispositional Mindfulness. The hypotheses of the present research can be expressed in the form of the following statements:

- Dispositional Mindfulness has a substantial mediating effect on the association between Neuroticism and Worries, Tension and Lack of Joy.

- Dispositional Mindfulness has a substantial mediating effect on the association between Conscientiousness and Worries, Tension and Lack of Joy.

Based on the arguments from the literature, the hypotheses would be tested by analysing the paths of Conceptual Model 1.1:



Conceptual Model 1.1. Neuroticism and Conscientiousness as predictor variables, Worries, Tension, and Lack of Joy as criteria, and Dispositional Mindfulness as a mediator variable.

2. Method

The sample was analysed using the open data from the database *figshare.com*; Tran, U., Wasserbauer, J., & Voracek, M. (2021, January 25). Incremental validity of Dispositional Mindfulness over and above the Big Five. <https://doi.org/10.6084/m9.figshare.9913085.v1>. The present research examines only non-facet associations and inputs of Dispositional Mindfulness as a mediator variable, in order to obtain the parameters for the importance of indirect pathways in the associations between the predictors Neuroticism and Conscientiousness with the criteria Worries, Tension and Lack of Joy (not with the dimensions Depression and Anxiety, as in the original research). The sample consisted of adult German-speaking volunteers $N = 430$ (73% female and 27% male; mean age 38.0, $SD = 14.7$, age range: 18–76).

2.1. Measures

The short version of the Big Five Inventory (*Kurzversion des Big Five Inventory*, BFI-K; Rammstedt & John, 2005) was used to assess the scores on Neuroticism (4 items) and Conscientiousness (4 items). The questions use a five-point Likert-type scale ranging from 1 (Completely disagree) to 5 (Completely agree). The instrument was validated accord-

ing to several criteria: factorial, inter-rater in relation to partner assessments and simultaneously in comparison with other instruments from the group of Big Five and five-factor models (Kovaleva, Beierlein, Kemper, & Rammstedt, 2013). Both alpha coefficients, Neuroticism ($\alpha = .78$) and Conscientiousness ($\alpha = .69$) provide evidence of adequate reliability.

The short version of the Five Factor Mindfulness Questionnaire (FFMQ; Baer et al., 2006) was used to obtain the aggregate score on Dispositional Mindfulness. The questions are formatted as a five-point Likert-type scale, containing a total of 39 items (“I pay attention to how my emotions affect my thoughts and behaviour”) with 19 inverse-scored items. Higher scores indicate higher levels of traits. The scale was constructively and predictively validated for alexythymia, Worries, rumination, dissociation, and stress-related psychological symptoms (Michalak, Zarbock, Drews, Otto, Mertens, Ströhle, Schwinger, Dahme, & Heidenreich, 2016; De Bruin, Topper, Muskens, Bögels, & Kamphuis, 2012). The alpha coefficient provides evidence of high consistency. ($\alpha = .92$).

The Perceived Stress Questionnaire (PSQ; Fliege, Rose, Arck, Walter, Kocalevent, Weber, & Klapp, 2005) was used to assess the scores on Worries (5 items), Tension (5 items), and Lack of Joy (5 items). Higher scores indicate higher manifestations of these responses. The questionnaire instructs respondents to provide final answers based on how much they agree with the statement and their long-term perception (“You feel irritable and tense”; “You have many worries”; “You feel you’re doing things because you have to, not because you want to”). The questions use a four-point progressive scale. The subscales were validated with a healthy and clinical population (Fliege, Rose, Arck, Walter, Kocalevent, Weber, & Klapp, 2005). The subscales’ alpha coefficients demonstrate high reliability (Worries $\alpha = .88$, Tension $\alpha = .85$, Lack of Joy $\alpha = .85$).

2.2. Podaci i analize

The hypotheses were tested using the open data from the database *figshare.com*; Tran, U., Wasserbauer, J., & Voracek, M. (2021, January 25). Incremental validity of Dispositional Mindfulness over and above the Big Five. <https://doi.org/10.6084/m9.figshare.9913085.v1>

IBM AMOS 26 was used to test the Conceptual Model 1.1, to analyse the modification indices and RMSE, CFI and TLI fit parameters, as recommended by Garson (2009). The statistical package JASP 0.14.1 was also used. The sample results were obtained using descriptive analysis and frequency analysis. Internal consistency was also analysed, and the reliability parameters (Cronbach's alphas) were calculated for all applied scales. Pearson's product-moment correlation was used to test the linearity of relationships between variables, and the results were interpreted in accordance with Evans' (1996) criteria (Divaris, Vann, Baker, & Lee, 2012). After inspecting the conditions, with an emphasis on linearity, and in accordance with the recommendations (Hayes, 1996; Darlington, & Hayes 2017), determination pathways and coefficients (R²) were examined using the AMOS 26 software solution for checking the Conceptual Model 1.1. In line with the theoretical assumptions (Shi, Liu, Wang, & Wang, 2015; Rau & Williams, 2016), Neuroticism and Conscientiousness were entered as predictors, Dispositional Mindfulness as mediator, and Worries, Tension, and Lack of Joy as criterion variables. In accordance with modification indices and fit parameters (recommended by Garson (2009)), the model was modified and re-examined. Then, a mediation analysis of the paths of the modified model followed. To examine the importance of indirect paths, we used the mediation analysis. The levels of statistical significance ($p < .01$) and confidence interval (LLCI and ULCI) obtained by the resampling method at 5,000 iterations (as a more relevant and less demanding indicator of the condition (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002, according to Fong & Loi, 2016) were used as indicators of significance with standardized and unstandardized coefficients reported. Indirect effect parameters were considered significant if the 95% CI range did not include 0 as a value (Lockhart, MacKinnon, & Ohlrich, 2011).

2.3. Correlation Results

Table 1.2. Pearson Correlations

| Variables | Neuroticism | Conscientiousness | Dispositional Mindfulness | Worries | Tension | Lack of Joy |
|---------------------------------|-------------|-------------------|------------------------------|---------|---------|----------------|
| 1. Neuroticism | — | | | | | |
| | — | | | | | |
| 2. Conscientiousness | -0.305 | — | | | | |
| | < .001 | — | | | | |
| 3. Dispositional Mindfulness | -0.641 | 0.413 | — | | | |
| | < .001 | < .001 | — | | | |
| 4. Worries | 0.686 | -0.352 | -0.571 | — | | |
| | < .001 | < .001 | < .001 | — | | |
| 5. Tension | 0.638 | -0.268 | -0.541 | 0.690 | — | |
| | < .001 | < .001 | < .001 | < .001 | — | |
| 6. Lack of Joy | 0.592 | -0.448 | -0.619 | 0.666 | 0.685 | — |
| | < .001 | < .001 | < .001 | < .001 | < .001 | < .001 |

Table 1.2. indicates strong positive correlations between Neuroticism and Worries ($r = .68$; $p < .01$), Neuroticism and Tension ($r = .63$; $p < .01$), a moderate correlation between Neuroticism and Lack of Joy ($r = .59$; $p < .01$), a strong negative correlation between Neuroticism and Dispositional Mindfulness ($r = -.64$; $p < .01$), and a weak negative correlation with Conscientiousness ($r = -.30$; $p < .01$). For Conscientiousness, the correlations are moderate and positive with Dispositional Mindfulness ($r = .41$; $p < .01$), weak and negative with Worries ($r = -.35$; $p < .01$), very weak and negative with Tension ($r = -.26$; $p < .01$), and moderate and negative with Lack of Joy ($r = -.44$; $p < .01$). Given the relatively satisfactory levels of the indicators, a series of analyses were carried out next with the aim of further testing the conditions. The path between the variables Conscientiousness and Tension was excluded due to a very low correlation, to avoid the assumption of linearity and not compromise the further interpretation of the regression coefficients (Darlington & Hayes, 2017). A visual inspection of the scatter diagram revealed deviations in the relationship between Conscientiousness and Worries, which is proof of violation of homoscedasticity. Based on the

inspection of the histograms, we observed that the residuals of the Worry and Stress variables were not normally distributed. Therefore, in accordance with the recommendations (Hayes, 2018, p. 98), the indicators of the Bootstrap method of resampling were set to 5,000 replications with confidence interval adjustment 95%.

2.4. Model and Mediation Analysis

The examination of the Conceptual Model 1.1 showed that all pathways are statistically significant, except for the direct path Conscientiousness and Tension ($b = -0.03$; $p > .01$) and direct path Conscientiousness and Worries ($b = -0.15$; $p > .01$). The tested model accounts for 51% of the variance Worries, 43% Tension and 48% Lack of Joy, and the fit parameters are unsatisfactory. (CFI = .84; TLI = .23; RMSEA = .39). The direct pathways Conscientiousness and Tension and Conscientiousness and Worries were consequently excluded. The model was modified, and covariation pathways were identified, according to modification indices. The Conceptual Model 1.2 examination showed that the fit index was satisfactory and moderate (CFI = .99; TLI = .95; RMSEA = .09) (Kline, 2005; Kim, Ku, Kim, Park, & Park, 2016; Fabrigar, Wegener, MacCallum, & Strahan, 1999). Inspecting the determination coefficients (R^2) we determined that the predictors account for 50% of the variance Worries, 44% Tension and 48% Lack of Joy.

After examining the Conceptual Model 1.2., we determined that Neuroticism is a strong positive predictor for the variable Worries ($b = 0.56$; $\beta = 0.54$; $p < .01$), Tension ($b = 0.48$; $\beta = 0.49$; $p < .01$), and Lack of Joy ($b = 0.31$; $\beta = 0.32$; $p < .01$), and a negative predictor for Dispositional Mindfulness ($b = -2.9$; $\beta = -0.57$; $p < .01$). Dispositional Mindfulness is a statistically significant negative predictor for the three criteria: Worries ($b = -0.05$; $\beta = -0.22$; $p < .01$), Tension ($b = -0.04$; $\beta = -0.22$; $p < .01$) and Lack of Joy ($b = -0.06$; $\beta = -0.34$; $p < .01$).

It was confirmed that Neuroticism associates negatively with Dispositional Mindfulness and positively with Worries, Tension, and Lack of Joy. It was also confirmed that Dispositional Mindfulness negatively correlates with Worries, Tension, and Lack of Joy. The indirect path values are presented in Table 1.4. below.

Table 1.4. Indirect Effects

| | | <i>b</i> | SE | <i>z</i> -value | <i>p</i> | 95% Reliability Interval | |
|----------------------|--------------------------|----------|-------|-----------------|----------|--------------------------|-------|
| | | | | | | LLCI | ULCI |
| BF_Neuroticism | → FFMQ_SUM → Worries | 0.149 | 0.028 | 4.806 | < .001 | 0.091 | 0.217 |
| BF_Neuroticism | → FFMQ_SUM → Tension | 0.139 | 0.017 | 4.578 | < .001 | 0.077 | 0.208 |
| BF_Neuroticism | → FFMQ_SUM → Lack of Joy | 0.180 | 0.028 | 4.149 | < .001 | 0.124 | 0.241 |
| BF_Conscientiousness | → FFMQ_SUM → Lack of Joy | 0.100 | 0.010 | -4.728 | < .001 | -0.096 | 0.058 |

Note: Delta Method Standard Errors, Maximum Likelihood Parameter

On the basis of values in Conceptual Model 1.2. and Table 1.4. we noted that Neuroticism, besides having direct effect, also has a strong indirect effect on the variable Worries via the variable Dispositional Mindfulness ($b = 0.15$; $\beta = 0.12$; $p < .001$, 95% Bca CI = 0.091, 0.217). The hypothesis that Dispositional Mindfulness strongly mediates in the relationship between Neuroticism and Worries was confirmed. Dispositional Mindfulness has a significant indirect effect on the relationship between Neuroticism and Tension ($b = 0.13$; $\beta = 0.12$; $p < .001$, 95% Bca CI = 0.077, 0.0208), and Lack of Joy ($b = 0.18$; $\beta = 0.19$; $p < .001$, 95% Bca CI = 0.124, 0.241). This confirms the hypotheses that Dispositional Mindfulness strongly mediates in the relationships between Neuroticism and Tension and Neuroticism and Lack of Joy. The study did not meet the conditions for examining the associations between Conscientiousness and Worries and Conscientiousness and Tension, due to modification indices. Therefore, the hypotheses that (1) Dispositional Mindfulness strongly mediates in the relationship between Conscientiousness and Worries, and (2) Dispositional Mindfulness strongly mediates in the relationship between Conscientiousness and Tension were left as recommendations for further research.

On the other hand, Conscientiousness associates directly and positively with Dispositional Mindfulness ($b = 1.5$; $\beta = 0.24$; $p < .01$), and negatively with Lack of Joy ($b = -0.22$; $\beta = -0.18$; $p < .01$). Besides having direct effect, Conscientiousness also has a strong indirect effect on the

variable Lack of Joy via the variable Dispositional Mindfulness ($b = -0.10$; $\beta = -0.08$; $p < .001$, 95% Bca CI = $-0.146, -0.058$). It was confirmed that Conscientiousness associates with Dispositional Mindfulness, and with Lack of Joy. Dispositional Mindfulness strongly mediates in the relationship between Conscientiousness and Lack of Joy. The next section, Discussion, deals with the most important findings, theoretical implications, limitations, and recommendations for further research.

3. Discussion

The aim of the present research was to examine the mediating effects of Dispositional Mindfulness in the associations between the traits Neuroticism and Conscientiousness, on the one hand, and Worries, Tension, and Lack of Joy, on the other. The following findings were confirmed: 1) For Neuroticism, the associations are large and positive with Worries, Tension, and Lack of Joy, and negative for Dispositional Mindfulness; 2) For Conscientiousness, the associations are negative for Lack of Joy, and positive for Dispositional Mindfulness. As was expected, Dispositional Mindfulness has strong mediating effects in each association, except in excluded pathways Conscientiousness – Worries and Tension. Neuroticism or negative affect disposition associates positively with all the examined criteria (Thompson, 2008; Banjongrewadee, Wongpakaran, Wongpakaran, Pipanmekaporn, Punjasawadwong, & Mueankwan, 2020). The correlation between Neuroticism and Worries could be in favour of the assumptions by Harle, Shenoy, & Paulus (2013), who state that disagreeable emotional states activate information, concepts, and attitudes congruent with current feelings and thus increase the likelihood of perceiving and experiencing the world as threatening (Tellegen, Watson & Clark, 1999; Watson & Clark, 1992; Kercher, Rapee, & Schniering, 2009). In contrast, arousal may have a more selective role in biasing expectancies of action cancellation. According to the Cognitive Vulnerability Model, higher levels of arousal and negative valence may decrease the range of potential solutions, stimulate risk exaggeration, and impair effective responses (Harle et al., 2013). The finding that Neuroticism strongly associates with Worries via the negative correlation with Dispositional Mindfulness could expand the theoretical

implications of this assumption. According to the Competitive Processes Hypothesis (Harle et al., 2013), emotional processing redirects attentional and performative resources away from task-relevant information and generally impairs higher cognitive processes relevant to correct appraisal and task performance function and related computational mechanisms.

As Neuroticism associates negatively with the variable Dispositional Mindfulness, it is possible that individuals with high Neuroticism scores experience difficulties in perceiving current events flexibly and become rigidly focused on the negative aspects. This can lead to postponing effective and timely problem-solving and to frequent worrying. This finding supports the conclusion that negative life experiences decrease the individuals' ability to be open and balanced with their emotions (Chang, Yu, Najarian, Wright, Chen, Chang, Du, & Hirsch, 2016). Regarding the claim that Dispositional Mindfulness contributes to the (self) regulation of responses, it is advisable to proceed with caution. Although the indirect effects of Neuroticism via Dispositional Mindfulness are less pronounced than direct effects, the association is not a positive one, i.e., higher Neuroticism does not imply higher Dispositional Mindfulness. Therefore, we suggest that this correlation be further examined in multiple time series longitudinal research, together with the variable Self-Control, to shed light on this phenomenon. The inclination of highly neurotic individuals to perceive events as harmful or threatening (Hecht, 2013; qtd in Denovan, Dagnall, & Lofthouse, 2018) could explain the potential association between Neuroticism and Tension and strong indirect effects via Dispositional Mindfulness. The symptom perception hypothesis (Watson & Pennebaker, 1989; qtd in Denovan, Dagnall, & Lofthouse, 2019) contends that high neuroticism increases perception of pain levels, which results in over reporting of physical grievances (Howren & Suls, 2011). This is partially supported by the covariation of Worries and Tension in the 1.2. Model. However, this does not exclude the possible contribution of other variables, such as genuine psychosomatic symptoms (Johnson, 2003, qtd in Denovan, Dagnall, & Lofthouse, 2019). Future research should take into account these variables as well. This is theoretically relevant because Dispositional Mindfulness has been associated with adequate physical and physiological functioning (Vest Rogers, 2009; qtd in Bowlin, 2012; Brown, Weinstein,

& Creswell, 2012; Jaiswal, Muggleton, Juan, & Liang, 2019). The association between Neuroticism and Lack of Joy could be explained by referring to the Affect Level Model (DeNeve & Cooper, 1998; Gross, Stutton, & Ketelaar, 1998; Lucas & Baird, 2004), which suggests that higher neuroticism individuals react more strongly to unpleasant experiences, and less intensely to pleasant ones. Their negative affect arousal threshold is lower and the affective tone more intense, so the unpleasant emotions are more frequent. The individuals with high neuroticism scores tend to adopt maladaptive and avoidant behaviours, which, in the long run, can lead to impaired motivation and frequent distress in daily life (Ireland, Hepler, Li, & Albarracin, 2014; Barlow, Sauer-Zavala, Carl, Bullis, & Ellard, 2014).

The findings that Conscientiousness and Dispositional Mindfulness have strong negative associations with Lack of Joy, and that Dispositional Mindfulness has significant mediating effects, suggest that there are two important aspects to this phenomenon. Conscientiousness is a natural capacity to cope in stressful situations (Bartley & Roesch, 2011), and consistently predicts the use of adequate health related behaviours (Connor-Smith & Flachsbart, 2007; Saklofske, Austin, Galloway, & Davidson, 2007). Well organized, thorough, and self-determined individuals high in Conscientiousness are likely to actively improve their quality of life, which in turn increases the likelihood of positive reinforcement in different spheres. These efforts may help these individuals prevent potential stressors, and their high levels of self-control and persistence may contribute to sustaining constructive behaviours over time (Bartley & Roesch, 2011).

Dispositional Mindfulness could provide a deeper focus on task performance, associated with positive affect (McCay-Peet, Lalmas, & Navalpakkam, 2012). As some studies have suggested (Roccas, Sagiv, Schwartz, & Knafo, 2002; Granqvist & Kajonius, 2015) Conscientiousness and Dispositional Mindfulness, acting together, could support the formation and actualization of personal values. Future research would benefit from adopting a serial mediation model with value variables to examine these associations.

There are several significant limitations to this research. The cross-sectional nature of the data makes it impossible to draw conclusions about causality, i.e., direction of the relationship between the variables. Therefore, the results should be interpreted in a hypothetical

or predictive manner. The opposite direction of the variables' effects is possible in almost every association. For example, an increased positive affect may lead to better focus and commitment to personal plans, goals, and obligations (Silvia, Abele, 2002), and the absence of Worries may allow individuals to achieve a more impartial insight and reduce the experience of threat and discomfort. This shortcoming could be overcome by examining the associations in multiple time series. Second, since the findings were obtained from the general population, it is impossible to generalize the data for the clinical population, where there are potentially more intense symptoms with physiological causes. An important aspect of future research could be the inclusion of data obtained by different measurement approaches (neurological, observational, etc.) in order to prevent the respondents' potential bias in self-report measures. Since, previous research showed that practicing Dispositional Mindfulness can contribute to trait change (Shapiro et al., 2006; Bailey, Opie, Hassed, & Chambers, 2019), examining the association between these two forms of mindfulness would provide further insight into the structure of Dispositional Mindfulness. complement findings on their characteristics.

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MEDIJACIONA ULOGA PUNE SVESNOSTI I PAŽNJE U ODNOSIMA NEUROTICIZMA I SAVESNOSTI SA BRIGAMA, TENZIJAMA I IZOSTANKOM SREĆE

REZIME: Cilj ovog istraživanja jeste da se ispituju medijacioni doprinosi *Pune svesnosti i pažnje* u odnosima *Neuroticizma i Savesnosti sa Brigama, Tenzijama i Izostankom sreće*. Uzorak su činili dobrovoljci iz opšte populacije sa nemačkog govornog područja (N = 430; 73% ženskih i 23% muških ispitanika) prosečne starosti \bar{x} = 39 godina, σ = 14.6 (min = 19, maks = 77 godina). **Upotrebene skale su demonstrirale dobru i visoku pouzdanost. Ukazano je da Puna svesnost i pažnja ostvaruje negativnu vezu sa Neuroticizmom** ($r = -0.64$; $p < .01$) i pozitivnu sa *Savesnošću* ($r = -0.41$; $p < .01$), kao i negativne veze sa *Brigama* ($r = -0.57$; $p < .01$), *Tenzijama* ($r = -0.54$; $p < .01$) i *Izostankom sreće* ($r = -0.62$; $p < .01$) na osnovu čega je formiran Konceptualni model 1.2. Rezultati medijacionih analiza modela ukazuju na značajan indirektan efekat putem *Pune svesnosti i pažnje* u svim testiranim relacijama: *Neuroticizam i Brige* ($b = 0.15$; $\beta = 0.12$; $p < .001$, 95% Bca CI 0.091, 0.217), *Neuroticizam i Tenzije* ($b = 0.13$; $\beta = 0.12$; $p < .001$, 95% Bca CI 0.077, 0.208), *Neuroticizam i Izostanak sreće* ($b = 0.18$; $\beta = 0.19$; $p < .001$, 95% Bca CI 0.124, 0.241), kao i u relaciji *Savesnost i Izostanak sreće* ($b = -0.10$; $\beta = -0.08$; $p < .001$, 95% Bca CI -0.096, -0.058). Podaci govore u prilog teorijskim postavkama da puna svesnost i pažnja igraju važnu ulogu u vezi sa osobinama ličnosti i poteškoćama na kognitivnom i afektivnom i somatskom planu, da doprinose povećanom uvidu u sopstvena ponašanja i potencijalnom formiranju funkcionalnih odgovora.

KLJUČNE REČI: *Puna svesnost i pažnja, Neuroticizam, Savesnost.*