

Original Article

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The Dark Side of Belief: Personality, Conspiratorial Thinking and Mental Health*

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Summary

Conspiracy beliefs have gained increasing attention due to their potential psychological and societal impact. This study investigates whether the belief in conspiracy theories accounts for individual differences in mental health beyond what can be explained by demographics and personality traits. Data from a national quota sample panel ($N=690$) was analyzed using hierarchical regression which showed that demographics accounted for a small share of the variance in mental health. The inclusion of Dark Tetrad traits, particularly psychopathy and sadism – increased the portion of explained variance. Belief in global conspiracies, added in the final step, accounted for an additional, although modest, portion of the variance. Lower income, higher levels of psychopathy and sadism, and stronger conspiratorial thinking were associated with poorer mental health. These findings suggest conspiracy beliefs may function not just as ideologically relevant but also as a psychological risk factor, highlighting their relevance in public health efforts aimed at improving mental health.

Keywords: Conspiracy Beliefs, Mental Health, Dark Tetrad, Psychopathy, Sadism

Introduction

Conspiracy beliefs have become increasingly prevalent and attract increasing scholarly attention because of their implications for both societal functioning and for individual well-being. While prior research has consistently linked conspiratorial

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thinking to psychological distress, anxiety, paranoia, and a reduced well-being, much of this work has examined these associations in isolation or without accounting for broader dispositional factors (Krüppel, Yoon and Mokros, 2023; Leibovitz *et al.*, 2021; Freeman and Bentall, 2017). In parallel, dark personality traits, particularly psychopathy and everyday sadism, have been shown to relate to both poorer mental health outcomes and a greater endorsement of conspiracy theories (e.g., Enders *et al.*, 2023; Uscinski *et al.*, 2022). However, relatively little is known about whether conspiracy beliefs contribute to mental health beyond the effects of stable personality dispositions and sociodemographic factors (Alfaro, 2025; Bowes *et al.*, 2021). Addressing this gap, the present study examines whether the belief in conspiracy theories explains the unique variance in mental health after controlling for demographics and Dark Tetrad traits in a national quota sample, thereby clarifying the psychological significance of conspiratorial thinking and highlighting its potential relevance for public mental health. By isolating conspiratorial thinking as a unique, independent predictor of psychological distress rather than as a mere byproduct of personality, this study contributes to models of mental health and signals to public health policymakers that addressing maladaptive belief systems is a critical, distinct target for public health interventions aimed at enhancing the well-being of the population.

Mental health is a state of mind characterized by emotional well-being, good behavioral adjustment, relative freedom from anxiety and disabling symptoms, and a capacity to establish constructive relationships and cope with the ordinary demands and stresses of life (American Psychological Association, n.d.). It is a complex and multifaceted issue influenced by a wide range of biological, psychological, and social factors. However, research consistently identifies socioeconomic disadvantages, early-life trauma, chronic stress, and social isolation as the strongest predictors of poor mental health, while genetic and personality traits act as underlying vulnerabilities. Socioeconomic status (SES) is widely recognized as a key determinant of both physical and mental health, with extensive evidence demonstrating its enduring and far-reaching impact. Lower SES is reliably associated with poorer overall health, greater burden caused by disease, and reduced life expectancy (Halbreich, 2021; Steptoe and Zaninotto, 2020; Cadar *et al.*, 2018; Goodman, Slap and Huang, 2003; Ferrie *et al.*, 2002).

There are indications that the relationship between income and mental health and well-being may be causal, rather than merely correlational (Thomson *et al.*, 2022). Pathways linking SES to health outcomes include restricted access to health-care, greater exposure to environmental risks, and lower engagement in health-promoting behaviors. Individuals with lower SES often experience elevated financial strain, inadequate housing conditions, and limited availability of nutritious food and preventive services. Such persistent stress related to poverty, unemployment, and

social exclusion is associated with higher levels of anxiety, depression, and psychological distress. Therefore, we included measures of socioeconomic status (SES) as the first block of predictors in the hierarchical analysis presented in this paper, in order to account for the proportion of variance in mental health explained by our other variables of interest (the Dark Tetrad and conspiratorial thinking) above and beyond the already established effects of demographic variables.

Mental Health and Dark Tetrad Traits

A growing body of research indicates that socially aversive personality traits encompassed by the Dark Tetrad (Machiavellianism, narcissism, psychopathy, and everyday sadism) are systematically associated with indicators of mental health and psychological adjustment. Early work on the Dark Triad demonstrated that these traits are linked to poorer psychosocial functioning, including greater interpersonal conflict, emotional dysregulation, and maladaptive coping (Jonason *et al.*, 2018; Paulhus and Williams, 2002). Subsequent studies incorporating sadism as the fourth trait have largely reinforced and extended these conclusions.

Psychopathy, in particular, is robustly linked to emotional deficits such as reduced affective empathy, diminished guilt, and the impaired regulation of emotion, which are in turn related to poorer mental health outcomes (Grieve and Mahar, 2013; Ali, Amorim and Chamorro-Premuzic, 2009). Beginning early in life, juvenile psychopathy may be associated with heightened negative emotional states such as anger, hostility, anxiety, and depression (Skeem *et al.*, 2011; Bartels *et al.*, 2003). Machiavellianism has likewise been associated with chronic distrust, rumination, and perceived interpersonal threats (Jakobwitz and Egan, 2006), factors that plausibly contribute to heightened stress and the internalizing of symptoms. The relationship between narcissism and mental health appears more complex and contingent on the form of narcissism assessed (Papageorgiou, Denovan and Dagnall, 2019; Vize *et al.*, 2018). Grandiose narcissism is sometimes associated with higher self-esteem and lower self-reported depression, potentially reflecting defensive self-enhancement rather than genuine well-being (Papageorgiou, Denovan and Dagnall, 2019; Sedikides *et al.*, 2004). In contrast, vulnerable narcissism is reliably linked to emotional instability, anxiety, depressive symptomatology, and hypersensitivity to social evaluation (Miller *et al.*, 2011). Finally, everyday sadism has been associated with lower empathy, greater hostility, and increased enjoyment of others' suffering, and emerging evidence suggests it is also linked to poorer psychological adjustment and elevated aggressive ideation (Plouffe *et al.*, 2023; Buckels, Jones and Paulhus, 2013).

Although effect sizes are typically modest and most studies rely on cross-sectional self-reporting designs, the convergence of findings across diverse samples suggests that dark personality traits are meaningfully related to mental health vul-

nerabilities. Across traits, deficits in empathy and the maladaptive regulation of emotion have been proposed as key psychological mechanisms connecting a dark personality with mental health (Papageorgiou, Denovan and Dagnall, 2019; Jonason and Krause, 2013). Still, the associations are not uniform across traits: psychopathy and Machiavellianism tend to show the strongest and most consistent links to distress and maladjustment, narcissism exhibits mixed associations depending on its subtype, and sadism appears closely tied to affective coldness and antisocial tendencies, with emerging implications for the overall well-being. Hence, we have introduced these four dimensions as the second block in the regression analyses presented in this paper.

Mental Health and Dark Tetrad Traits: Is There a Link to Conspiratorial Thinking?

Conspiracy theories are psychological and social phenomena in which people explain events or situations as the result of hidden, malevolent actions by powerful groups, often to satisfy epistemic, existential, or social needs and to make complex events seem more predictable and controllable (Douglas and Sutton, 2023). Meta-analytic evidence indicates that the strongest correlates of conspiratorial ideation include a) perceiving danger and threat, b) relying on intuition and having odd beliefs and experiences, and c) being antagonistic and acting superior (Bowes, Costello and Tasimi, 2023), highlighting both motivational and personality-related underpinnings of conspiracy beliefs. Therefore, conspiracy theories are not merely cognitive or social curiosities but they reflect broader patterns of thought shaped by how individuals interpret threats and uncertainty.

Perceiving a threat has been linked to adverse psychological outcomes regardless of this threat being real or imagined (Conley *et al.*, 2023). It is, consequently, reasonable to expect a negative relationship between believing in conspiracies and mental health. This has been confirmed by a large body of research. Conspiratorial thinking is related to lower overall well-being and deteriorated social functioning, such as strained interpersonal relationships, social rejection, and reduced quality of life (van Prooijen *et al.*, 2023; van Prooijen, Spadaro and Wang, 2022; Cichocka, Marchlewska, and Golec de Zavala, 2016). Substantial research has linked belief in conspiracy theories to a range of mental health indicators, including increased anxiety (e.g., Krüppel, Yoon and Mokros, 2023; Grzesiak-Feldman, 2013), depressive symptoms (Green *et al.*, 2023), paranoia (Stasielowicz, 2022; Freeman *et al.*, 2020), suggesting that conspiratorial thinking may co-occur with or exacerbate difficulties in psychological well-being (for a review and a meta-analysis of motivational and personological correlates of conspiracy beliefs see Biddlestone *et al.*, 2025 or Bowes, Costello and Tasimi, 2023).

The second set of correlates of conspiratorial ideation of interest in this study, namely, being antagonistic and acting superior, is closely linked to the Dark Tetrad traits. As previous research confirms, individuals high in socially aversive traits, particularly those of the Dark Tetrad group, tend to be more susceptible to conspiratorial thinking (e.g., Kay, 2021). At the trait level, specific dimensions of the Dark Triad show distinct yet convergent associations with conspiracy endorsement. Machiavellianism is linked to conspiracies aligning with a cynical and manipulative worldview (*ibid.*), narcissism with those serving to protect and enhance the self-concept (Giancola, Palmiero and D'Amico, 2024), whereas psychopathy with beliefs reflecting assumptions that others are exploitative and untrustworthy (Hughes and Machan, 2021) – patterns that mirror these traits' characteristic interpersonal orientations. Taken together, these findings point to a complex interplay in which dispositional tendencies toward perceiving threats and atypical cognitive experiences contribute to both endorsement of conspiracy beliefs and their associations with poorer mental health outcomes.

The Aim of the Study

Overall, although much of the existing evidence is correlational and cross-sectional, converging findings indicate that conspiratorial thinking is associated with greater anxiety, paranoia, depressive symptoms, and lower psychological well-being. Theoretical accounts emphasize that conspiracy beliefs may both reflect underlying distress and contribute to the maintenance of maladaptive cognitive styles. In line with that, there is longitudinal evidence suggesting a directional effect, with increases in conspiracy beliefs predicting subsequent increases in anxiety, aversion to uncertainty, and existential threat (Liefkett, Christ and Becker, 2022). However, research that simultaneously accounts for both dark personality traits and conspiratorial thinking in explaining mental health outcomes is scarce (Alfaro, 2025; Bowes *et al.*, 2021).

In light of this, the present study aims to examine whether belief in conspiracy theories contributes to explaining individual differences in mental health over and above demographic characteristics and socially aversive personality traits. We hypothesized the Dark Tetrad personality traits and conspiratorial thinking being positive predictors of mental health problems, and higher SES having a protective role, i.e. being a negative predictor of mental health problems. We also expected that sociodemographic variables would explain a significant portion of variance in mental health problems, that Dark Tetrad personality traits would have an incremental contribution toward explaining individual differences in mental health problems, and finally, that believing in conspiracy theories would explain additional portion of variance in mental health over and beyond sociodemographic and personality variables.

Predictors were entered hierarchically based on theoretical considerations and prior research. Sociodemographic variables were entered in the first block to control for their upstream, structural influence and to allow subsequent blocks to account for additional variance beyond established socioeconomic determinants. To maintain a parsimonious model, we focused on socioeconomic variables most consistently linked to mental health outcomes in previous literature. The Dark Tetrad traits were entered in the second block to reflect their conceptualization as relatively stable dispositional characteristics and to examine their incremental predictive value over and above sociodemographic factors. Conspiracy beliefs were introduced in the final step to assess their incremental contribution beyond both demographic and personality factors.

Method

Participants and Procedure

The participants in this study were 690 adults from a national quota panel recruited in the third wave of data collection conducted as part of a larger longitudinal study within the Adria Digital Media Observatory (ADMO) project.¹ The mean age of the participants was $M = 47.7$ ($SD = 12.38$; $\min = 21$, $\max = 66$), 50.4% were women, 69% had completed secondary education or less, while 31% had higher education. The online panel survey was conducted by Ipsos Croatia in March 2025.

Measures

Demographic characteristics collected and analysed in this research were age, gender, education (measured on an 8-level scale ranging from 1=unfinished elementary school to 8=postgraduate studies), and monthly personal income (measured on a 15-point scale ranging from 1=no income to 15=more than 1600 Euros).

The Short Dark Tetrad scale (Paulhus *et al.*, 2021; Croatian version adapted by Wertag, Ribar and Sučić, 2023), a measure of dark personality traits, comprises 28 statements, with seven items assessing each of the four dark personality dimensions: Machiavellianism, narcissism, psychopathy, and sadism. Participants indicate their level of agreement using a 5-point Likert-type scale (ranging from 1=strongly disagree to 5=strongly agree). Scores for each trait are obtained by averaging responses to the seven relevant items. In this study, the subscales demonstrated acceptable internal reliability, with Cronbach's alpha coefficients of 0.68 for Machiavellianism, 0.75 for narcissism, 0.74 for psychopathy, and 0.73 for sadism. These levels of internal consistency are comparable to those reported in the Croa-

¹ <https://admohub.eu/en/>

tian validation study (Wertag, Ribar and Sučić, 2023) and slightly lower than those observed in the original English version (Paulhus *et al.*, 2021).

Beliefs in conspiracy theories were measured using 13 statements describing various well-known global conspiracy theories (Blanuša and Kulenović, 2018). The statements cover a range of thematic domains, including vaccines and the pharmaceutical industry, citizen surveillance, chemtrails, global warming, 9/11 attacks, GMO, alien contacts, New World Order, etc. Participants indicated their agreement with statements such as: *There is a secret organization in the world whose goal is to destroy nation-states and impose a New World Order* on a 5-point Likert-type scale (ranging from 1=strongly disagree to 5=strongly agree). A total score was calculated as the mean rating across all statements. The reliability of the scale was high (Cronbach's $\alpha = 0.93$).

DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure – Adult (Bastiaens and Galus, 2018) was used as a measure of mental health. It consists of 23 questions that assess 13 psychiatric domains: depression, anger, mania, anxiety, somatic symptoms, suicidal ideation, psychosis, sleep problems, memory, repetitive thoughts and behaviors, dissociation, personality functioning, and substance use. Participants report how much (or how often) they have been bothered by the specific symptom during the past 2 weeks on a 5-point scale (0=none or not at all; 1=slight or rare, less than a day or two; 2=mild or several days; 3=moderate or more than half the days; and 4=severe or nearly every day). The total score is calculated by averaging the responses to all questions, and higher scores denote more mental health problems. The reliability of the scale was satisfactory, with Cronbach's alpha coefficient of 0.91.

Results

Mental health problems were not particularly pronounced in our sample. On average, participants reported being bothered by specific symptoms during the past two weeks only rarely (less than one or two days), which suggests relatively good overall mental health. However, average agreement with various conspiracy theories was relatively high. As for the Dark Tetrad personality traits, Machiavellianism was most pronounced, followed by narcissism, while psychopathy and sadism were less pronounced (Table 1).

Prior to the regression analysis, a correlation matrix was examined (Table 1 and Figure 1). Due to deviations from normality in most variables, both Pearson's and Spearman's correlation coefficients were calculated. The similarity between these two correlation metrics suggests that the linearity of observed bivariate is robust, providing solid support for subsequent regression analysis. Intercorrelations between the Dark Tetrad personality traits were moderate (the highest being be-

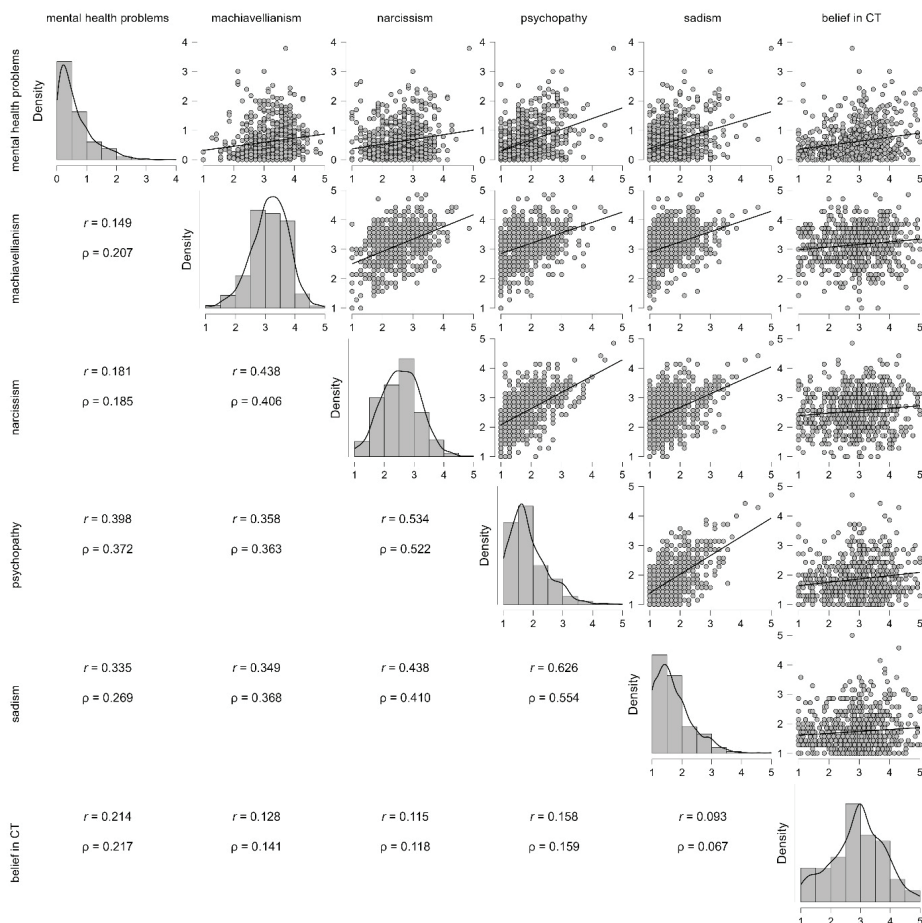
tween sadism and psychopathy), but their correlations with other predictor variables were weak. Importantly, the majority of predictor variables were correlated with the criterion variable, i.e. mental health problems. The level of education and monthly income were negatively correlated with mental health problems while Machiavellianism, narcissism, psychopathy, sadism, and believing in conspiracies were all positively correlated with mental health problems. We found no relations between mental health and age or gender.

Table 1. Descriptive Statistics and Correlations of the Sociodemographic Variables with Dark Tetrad Traits, Beliefs in Conspiracies and Mental Health Problems

	M	SD	Age	Gender	Education	Income
Age	47.8	12.38	—			
Gender			$r = .01$ $\rho = .01$	—		
Education			$r = -.06$ $\rho = -.03$	$r = -.01$ $\rho = -.01$	—	
Income			$r = -.03$ $\rho = -.09^*$	$r = -.18^{**}$ $\rho = -.19^{**}$	$r = .25^{**}$ $\rho = .27^{**}$	—
Machiavellianism	3.16	0.62	$r = -.09^*$ $\rho = -.10^*$	$r = -.09^*$ $\rho = -.09^*$	$r = .05$ $\rho = .05$	$r = <.01$ $\rho = .01$
Narcissism	2.55	0.65	$r = -.13^{**}$ $\rho = -.11^*$	$r = -.09^*$ $\rho = -.10^*$	$r = .03$ $\rho = .01$	$r = .06$ $\rho = .06$
Psychopathy	1.89	0.63	$r = -.01$ $\rho = .02$	$r = -.16^{**}$ $\rho = -.18^*$	$r = -.12^{**}$ $\rho = -.12^{**}$	$r = -.05$ $\rho = -.06$
Sadism	1.73	0.62	$r = -.19^{**}$ $\rho = -.18^*$	$r = -.24^{**}$ $\rho = -.24^{**}$	$r = -.04$ $\rho = -.04$	$r = -.01$ $\rho = .02$
Belief in conspiracy theories	2.90	0.88	$r = -.01$ $\rho = -.02$	$r = .02$ $\rho = .03$	$r = -.23^{**}$ $\rho = -.23^{**}$	$r = -.10^*$ $\rho = -.10^*$
Mental health problems	0.62	0.57	$r = -.04$ $\rho = -.04$	$r = .01$ $\rho = .03$	$r = -.14^{**}$ $\rho = -.14^{**}$	$r = -.20^{**}$ $\rho = -.18^{**}$

r = Pearson's correlation; ρ = Spearman's rho correlation; $^*p < .05$; $^{**}p < .01$

Figure 1. Correlations Between the Dark Tetrad Traits, Belief in Conspiracies and Mental Health Problems



Note: All correlations are statistically significant ($p < .01$) except for the correlation between sadism and beliefs in conspiracy theories (Pearson $p < .05$; Spearman ns.).

To assess the unique contribution of each individual predictor and the incremental variance explained by each predictor block, a three-step multiple regression was performed with mental health problems as the outcome variable (Table 2).

Table 2. Summary of Hierarchical Regression Analysis for Variables Predicting Mental Health Problems

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β	<i>B</i>	<i>SE</i>	β
Age	<-.01	<.01	-.08	<-.01	<.01	-.03	<-.01	<.01	-.03
Gender	-.03	.05	-.03	.09	.05	.08*	.09	.05	.07
Education	-.04	.02	-.10*	-.03	.02	-.07	-.02	.02	-.04
Income	-.03	.01	-.18**	-.02	.01	-.15**	-.02	.01	-.14**
Machiavellianism				-.01	.04	-.01	-.02	.04	-.02
Narcissism				-.02	.05	-.02	-.03	.04	-.03
Psychopathy				.31	.05	.34**	.30	.05	.32**
Sadism				.13	.05	.14**	.14	.05	.15**
Belief in conspiracy theories							.09	.03	.15**
R^2	.06			.22			.24		
ΔR^2				.17**			.02**		

* $p < .05$; ** $p < .01$

In the first step, age, gender, level of education and monthly income explained a statistically significant portion (6%) of variance in mental health ($F(4, 582) = 8.47$; $p < .01$). Participants with a lower level of education and a lower income were more likely to have mental health problems. The Dark Tetrad personality traits entered in the second step explained an additional 17% of variance in mental health and this change was significant ($F(4, 578) = 30.47$; $p < .01$). Higher psychopathy and sadism were related to more mental health problems. Finally, in the last step of the regression analysis, belief in conspiracy theories explained another 2% of variation in mental health over and above that already explained, and this change was also significant ($F(1, 577) = 14.65$; $p < .01$). In other words, believing in conspiracies significantly contributed to explaining the variance of mental health problems after controlling for sociodemographic and dark personality variables entered in the previous steps. Taken together, this model accounted for 24% of the variance in mental health, with psychopathy as the strongest predictor of mental health problems, followed by sadism, the belief in conspiracy theories and monthly income (all having similar explanatory power).

Discussion

Building on the theoretical premise that belief in conspiracy theories may reflect meaningful psychological processes beyond simple sociocultural exposure, the present study examined whether conspiratorial thinking explains unique variance in mental health after controlling for sociodemographic factors and Dark Tetrad traits in a Croatian quota sample.

Our results demonstrate that overall mental health – within the past two weeks, as the measure states – was relatively good. Levels of endorsement of conspiracy theories, consistent with previous research conducted in Croatia (Vranić, Hromatko and Tonković, 2022; Tonković *et al.*, 2021), remain stable. Furthermore, our results show that lower levels of education and income were significantly associated with greater mental health problems in our sample, consistent with extensive evidence that socioeconomic disadvantage – reflected in limited access to resources and increased exposure to stressors – is linked to poorer psychological outcomes (Salem and Robenson, 2025). This association is commonly explained through social determinants frameworks, according to which individuals with lower SES are disproportionately exposed to chronic stressors, financial insecurity, reduced access to health-related resources, and diminished perceived control over life circumstances. Together, these factors increase vulnerability to psychological distress (Alegría *et al.*, 2018; Lund *et al.*, 2018). Educational attainment may additionally contribute to mental health through its associations with health literacy, occupational opportunities, and coping resources. In contrast, although women tended to report lower monthly incomes, neither age nor gender showed significant direct associations with mental health, suggesting that in this context SES may be more salient than basic demographic characteristics in explaining variability in mental health. Moreover, income remained a more robust correlate of mental health than education once interrelations were considered in the regression analysis. This is compatible with findings that income and employment can mediate the impact of educational attainment on psychological distress (Milner *et al.*, 2018).

When the Dark Tetrad traits are considered, it is worth noting their associations with sociodemographics. Younger participants scored higher on Machiavellianism, narcissism, and sadism, and men scored higher than women on all four Dark Tetrad dimensions, with the largest gender effect observed for sadism. However, these associations were generally small in magnitude. Moderate intercorrelations among the Dark Tetrad traits, and somewhat lower but consistent relationships of all four traits with mental health problems, suggest some conceptual and empirical overlap within this system of socially aversive dispositions. When entered in the second block of hierarchical regression analysis, the Dark Tetrad traits collectively explained a meaningful portion of variance in mental health problems above and

beyond sociodemographic factors. Although all four Dark Tetrad traits showed significant bivariate associations with mental health problems, only psychopathy and sadism emerged as significant unique predictors in the regression model. This pattern suggests that the shared variance among the Dark Tetrad traits accounts for part of their zero-order relationships with mental health outcomes. In other words, it is possible that Machiavellianism and narcissism are correlated with mental health problems at the bivariate level largely because they overlap with more maladaptive components of the Dark Tetrad, particularly psychopathy and sadism. When this shared variance is statistically controlled, their unique contributions to mental health appear limited in our sample. By contrast, psychopathy and sadism seem to capture more proximal aspects of interpersonal antagonism, impulsivity, and affective dysregulation that are more directly linked to psychological distress. This pattern highlights the importance of distinguishing between shared and trait-specific variance within the Dark Tetrad when examining their associations with mental health outcomes.

Overall, these findings highlight the relevance of antisocial and aversive dispositions to individual distress. Current evidence supports the conclusion that the Dark Tetrad traits are not merely socially aversive constructs but are clearly implicated in individual differences in mental health and psychological adjustment, a pattern that is also echoed in our findings.

The belief in conspiracy theories, entered in the final step of hierarchical regression analysis, contributed uniquely to explaining mental health problems above and beyond demographics and dark personality traits. Psychopathy and sadism remained significant predictors which indicate that personality dispositions and belief systems contribute independently to variance in mental health, supporting the interpretation that these constructs capture distinct aspects of psychological functioning. Income was also a significant predictor in the final model aligning with a multifactorial model of mental health in which personality, cognition, and broader contextual factors such as SES jointly shape psychological outcomes rather than any single domain acting in isolation (e.g., Furnham and Cuppello, 2024).

Observed associations of psychological distress with personality traits and conspiracy beliefs can be understood within broader psychological frameworks of coping and threat processing. For example, the Existential Threat Model of Conspiracy Theories (van Prooijen, 2020) posits that people are drawn to conspiratorial explanations in response to perceived anxiety, uncertainty, or threats to meaning and control – processes that may overlap with the cognitive and affective tendencies linked to dark personality traits. The model is rooted in the broader idea that humans have a fundamental need to understand and predict their environment, especially when facing uncertainty, danger, or large-scale crises. Similarly, Douglas

et al. (2017) proposed that conspiracy beliefs can function as coping strategies for dealing with uncertainty and loss of control, particularly in contexts of social upheaval or existential threats. Such processes may explain why conspiracy endorsement tends to increase in times of crisis, such as during pandemics or economic instability, when individuals experience heightened anxiety and uncertainty (van Prooijen and Douglas, 2018). However, conspiracy beliefs do not necessarily reduce, and may even heighten, anxiety, intolerance of uncertainty, and feelings of an existential threat (Liekiefett, Christ and Becker, 2022). The directionality of these associations remains unclear – conspiratorial thinking might contribute to negative affect or, conversely, depressed mood might predispose toward conspiratorial explanations. Nevertheless, empirical links are consistently observed. These findings also highlight ongoing methodological limitations, as reviews emphasize the need for more longitudinal and multimethod research to clarify causal pathways and to disentangle subjective self-perceptions of well-being from its more objective indicators (Vize *et al.*, 2018; Muris *et al.*, 2017).

Limitations and Future Directions

Several limitations of this present study should be acknowledged. Firstly, the sample did not include individuals over the age of 66, a group that may be particularly vulnerable to both mental health difficulties and conspiracy beliefs due to typically lower SES. Future research should include older adults as well as adolescents, who are also at increased risk of psychological problems and high exposure to social media and conspiratorial content. Secondly, the measure used to assess mental health was developed for clinical assessment rather than as a general population instrument. Although it is commonly used in non-clinical research (e.g., Bravo *et al.*, 2018), and allows symptoms across multiple domains to be tracked, this breadth comes at the cost of limited depth in each domain. Finally, the scale used to measure belief in conspiracy theories consisted of a set of well-known conspiratorial narratives that were not specific to the cultural and national context of the sample. The psychometric literature on conspiracy belief measures highlights that instruments referring to specific conspiracies versus generic conspiracy mentality differ in scope and cultural relevance, and that culturally tailored items may capture variance more sensitively in particular populations.

The findings of this study suggest several potential avenues for psychological assessment and intervention, including identifying and addressing maladaptive personality characteristics and unhelpful belief systems that may underlie both aversive dispositions and distress. Importantly, although the Dark Tetrad traits are not the sole predictors of conspiracy beliefs – with factors such as political ideology, uncertainty avoidance, and epistemic motives also playing important roles (e.g.,

Giancola, Palmiero and D'Amico, 2024; Kay, 2021) – they nonetheless represent robust dispositional correlates across cultural and demographic contexts, likely because socially antagonistic personalities foster distrustful, adversarial worldviews and cognitive styles that favor simplistic or nonauthoritative explanations (Uscinski *et al.*, 2022). Thus, future research should investigate causal mechanisms, longitudinal trajectories (as in Liekefett, Christ and Becker, 2022), and potential mediators (e.g., coping strategies, social support) that link dark personality traits and conspiracy beliefs with mental health outcomes, as this may clarify how these dispositional and cognitive factors interact over time and inform more effective prevention and intervention strategies.

Conclusion

In this study, we examined the contribution of sociodemographic variables, dark personality traits, and belief in conspiracy theories in explaining variance in mental health problems. Our results show that belief in conspiracy theories accounts for a significant additional portion of variance in mental health problems above and beyond personality and sociodemographic factors, highlighting the psychological burden associated with conspiratorial ideation, which may reflect underlying mistrust, heightened threat perception, or cognitive biases linked with distress. In the final hierarchical regression model, income, psychopathy, sadism, and conspiratorial thinking made significant independent contributions to explaining mental health problems. Specifically, participants with lower income, higher levels of psychopathy and sadism, and a greater tendency toward conspiracy beliefs were more likely to report mental health problems. Although the overall amount of explained variance is relatively modest, the observed positive relationship between conspiracy beliefs and mental health difficulties underscores the importance of exploring cognitive and social belief systems in understanding psychological functioning. Moreover, these findings offer important insights into the psychological and social correlates of mental health in non-clinical populations, calling attention to the potential value of addressing conspiratorial thinking along with maladaptive personality features in mental health outcomes.

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MRAČNA STRANA VJEROVANJA: LIČNOST, KONSPIRATIVNO MIŠLJENJE I MENTALNO ZDRAVLJE

Sažetak

Vjerovanje u teorije zavjera privlači sve veću pažnju zbog svojeg potencijalnog psihološkog i društvenog utjecaja. Cilj ovog istraživanja bio je ispitati objašnjava li vjerovanje u teorije zavjera individualne razlike u mentalnom zdravlju povrh onih već objašnjenih demografskim obilježjima i crtama ličnosti. Podaci dobiveni na nacionalnom kvotnom uzorku građana (N=690) analizirani su hijerarhijskom regresijskom analizom koja je pokazala da demografske varijable objašnjavaju mali dio varijance mentalnog zdravlja. Uključivanje crta mračne tetrade, osobito psihopatije i sadizma, povećalo je udio objašnjene varijance. Vjerovanje u globalne teorije zavjera u završnom koraku analize objasnilo je dodatni, iako skroman, dio varijance. Niži prihodi, više razine psihopatije i sadizma te izraženije vjerovanje u teorije zavjera povezani su s lošijim mentalnim zdravljem. Ovi nalazi upućuju na to da vjerovanje u teorije zavjera može funkcionirati ne samo kao ideološki relevantan fenomen već i kao psihološki rizični čimbenik, što naglašava njihovu važnost u javnozdravstvenim nastojanjima usmjerenima na unaprjeđenje mentalnog zdravlja.

Cljučne riječi: vjerovanje u teorije zavjera, mentalno zdravlje, mračna tetrada, psihopatija, sadizam

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