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Aaron Cohen et Geries Abdo

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Résumé de l'article

Peu d'études ont examiné la relation entre les traits de personnalité de la triade noire et le comportement au travail dans les établissements de santé. La littérature récente appelle à des recherches beaucoup plus approfondies sur cette question, car les personnalités de la triade noire peuvent également avoir un impact négatif sur les organisations de soins de santé. Cette étude examine la relation entre les traits de personnalité de la triade noire, le comportement de travail contre-productif (CWB) et le comportement de citoyenneté organisationnelle (OCB), tel que rapporté par les superviseurs et les infirmières. L'étude a été réalisée auprès d'infirmières arabes en Israël. Une enquête a été menée auprès de 267 personnels infirmiers employés dans des hôpitaux et organismes de santé arabes dans le nord d'Israël, avec un taux de réponse de 57 %. Les résultats ont montré une relation négative significative entre la psychopathie secondaire et (OCB) (rapport des infirmières) et une relation positive entre le narcissisme et (OCB) (rapport des infirmières). Les résultats ont également montré une relation positive entre la psychopathie secondaire et (CWB) (rapport des infirmières) et une relation négative entre le narcissisme et (CWB) (rapport des infirmières). La psychopathie primaire et le machiavélisme n'avaient presque aucun effet sur les deux résultats professionnels. L'étude a conclu que les comportements destructeurs des infirmières qui nuisent à l'efficacité de l'organisation peuvent conduire à des soins aux patients de mauvaise qualité et doivent être traités immédiatement.

How the Dark Triad Affects Counterproductive Work Behaviour (CWB) and Organizational Citizenship Behaviour (OCB) in Israeli Arab Healthcare Organizations

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Abstract

Few studies have examined the relationship between dark triad personality traits and behavioral outcomes in healthcare organizations. Recent literature has called for much more extensive research on this issue because the dark triad can negatively affect healthcare organizations. To this end, we examined how dark triad traits relate to counterproductive work behaviour (CWB) and organizational citizenship behaviour (OCB), as reported by supervisors and nurses. We surveyed Arab nurses in Israel, specifically 267 nurses at Arab hospitals and retirement homes in the North of the country, and obtained a response rate of 57%. We found that CWB (nurse-reported) is positively associated with secondary psychopathy and negatively associated with narcissism. We also found that OCB (nurse-reported) is negatively associated with secondary psychopathy and positively associated with narcissism. Both primary psychopathy and Machiavellianism are weakly associated with CWB and OCB. We conclude that these destructive behaviours are detrimental to organizational effectiveness and might lead to low-quality patient care. They should be addressed by management.

Keywords: Dark triad personalities; counterproductive work behaviour; organizational citizenship behaviour; collectivist culture; Israeli Arabs

Résumé

Peu d'études ont examiné la relation entre les traits de personnalité de la triade noire et le comportement au travail dans les établissements de santé. La littérature récente appelle à des recherches beaucoup plus approfondies sur cette question, car les personnalités de la triade noire peuvent également avoir un impact négatif sur les organisations de soins de santé. Cette étude examine la relation entre les traits de personnalité de la triade noire, le comportement de travail

contre-productif (CWB) et le comportement de citoyenneté organisationnelle (OCB), tel que rapporté par les superviseurs et les infirmières. L'étude a été réalisée auprès d'infirmières arabes en Israël. Une enquête a été menée auprès de 267 personnels infirmiers employés dans des hôpitaux et organismes de santé arabes dans le nord d'Israël, avec un taux de réponse de 57 %. Les résultats ont montré une relation négative significative entre la psychopathie secondaire et (OCB) (rapport des infirmières) et une relation positive entre le narcissisme et (OCB) (rapport des infirmières). Les résultats ont également montré une relation positive entre la psychopathie secondaire et (CWB) (rapport des infirmières) et une relation négative entre le narcissisme et (CWB (rapport des infirmières). La psychopathie primaire et le machiavélisme n'avaient presque aucun effet sur les deux résultats professionnels. L'étude a conclu que les comportements destructeurs des infirmières qui nuisent à l'efficacité de l'organisation peuvent conduire à des soins aux patients de mauvaise qualité et doivent être traités immédiatement.

Mots-clés: Personnalités de la triade sombre; comportement contre-productif au travail; comportement de citoyenneté organisationnelle; culture collectiviste; Arabes israéliens

1. Introduction

In recent years, there has been growing awareness of the risks posed by certain personality traits in the workplace, specifically the "dark triad" (Szabó et al., 2023; Stephan et al., 2023; Cohen, 2018). Leading research has divided the dark triad into three similar but different personality traits: psychopathy; narcissism; and Machiavellianism (Paulhus & Jones, 2015; Rauthmann, 2012). All three share similar characteristics: lack of empathy; callousness; and antagonism (Vize et al., 2018). Each of them also has specific, unique characteristics: narcissists focus on a magnified notion of self-importance and interpersonal dominance; Machiavellians on strategic manipulation and political skills; and psychopaths on extreme impulsivity and frequent anti-social behaviours (Cohen, 2018; Paulhus & Jones, 2015).

While a significant amount of research has been done on dark triad personalities in the workplace (Muris et al., 2017), less is known about their effect on healthcare organizations and healthcare workers (Ghislieri et al., 2019). In a recent editorial in the *Journal of Nursing Management* (Darbyshire & Thompson, 2021), the authors contend that the voluminous literature on bullying by nurses reveals only "the tip of the iceberg." Darbyshire and Thompson (2021) point out that many hospitals and healthcare organizations have a toxic work environment. For example, studies have shown a high incidence of workplace violence and harassment among workers in the healthcare sector (Canadian Centre for Occupational Health and Safety (CCOHS), 2019) and in long-term institutions (Sayin et al., 2021). According to Darbyshire and Thompson (2021), "...what is so difficult for nursing even to contemplate is that such toxicity may not be accidental, but fuelled by 'narcissism, alongside psychopathy and Machiavellianism'" (Darbyshire & Thompson, 2021, p. 4). In this editorial, they call for more research into the effect of dark triad personalities on nursing, and this call is answered by the present study.

1.1 Health Professionals and the Dark Triad

The importance of health care and the inherent dependency of patients on their caregivers make the delivery of healthcare services crucially important. Society often places more trust in healthcare staff than in any other group of workers (Searle & Rice, 2020). Considerate behaviour is thus essential to the proper functioning of organizations in this industry (Dolan, van Ameringen & Arsenault, 1992) and to the wellbeing of patients (Ali & Johl, 2020). However, such behaviour is not necessarily exhibited by individuals with certain personality traits. Dark triad personalities negatively affect workgroups, the healthcare organizations they work for and, ultimately, the healthcare system (Nigro, 2018). For example, Stephan et al. (2023) found in a cross-industry study that psychopathy had the highest negative impact on psychological capital within the public service, healthcare and education sectors. The presence of psychopathic personalities significantly reduces hope, efficacy, resilience and optimism in the work environment.

It is therefore crucial to examine the dark triad in a healthcare setting with a view to accomplish two goals. First, healthcare employees and systems are negatively affected in many respects by self-centred employees who lack empathy and social integrity and who repeatedly employ deceit and planned manipulation (Khan et al., 2020). For example, CWB among lower-level nurses is strongly associated with their supervisors' level of narcissism (Ali & Johl, 2020). Li et al. (2020), in a study of examining physicians in Pakistan, argued that CWB may reflect the presence of dark triad personalities and called for more study of such individuals in health care. A positive association between head nurse psychopathy and nurse CWB was also reported by Erkutlu and Chafra (2019) in a study of nurses at nine university hospitals. They concluded that healthcare organizations must develop methods to detect psychopaths in the selection process and create an environment

that reduces the incidence of deviant activities. By better understanding this phenomenon, it will become possible to develop means to detect and cope with dark triad personalities and their negative impact. This is the first aim of the present study.

Second, Moore (1995) found that head nurses have higher levels of Machiavellianism than do nurses in non-managerial positions. More research on this issue will show the importance of personality in the nursing profession, notably whether Machiavellianism or some of its characteristics are detrimental to managerial nursing positions. For example, can head nurses with high levels of narcissism do their job effectively? Psychopathy can be toxic in a healthcare setting, as indicated by its negative association with psychological empowerment among nurses in the US (Turnipseed & Was, 2020).

1.2 How the Dark Triad Affects Counterproductive Work Behaviour (CWB) and Organizational Citizenship Behaviour (OCB)

Many studies have examined the relationship between dark triad personalities and work behaviour, particularly in-role performance, OCB and CWB (LeBreton et al., 2018). Werner (2000) cites a definition of OCB by Organ (1988): "individual discretionary behavior, not directly or clearly recognized by the formal reward system, that promotes the overall effective functioning of the organization." The literature distinguishes between two common forms of OCB: interpersonal and organizational OCB (Williams & Anderson, 1991). The former refers to positive, altruistic behaviours toward individuals in the organization, and the latter to positive, altruistic behaviours that contribute directly to the organization. CWB is defined as "... any intentional behavior on the part of an organization member viewed by the organization as contrary to its legitimate interests..." (Sackett, 2002, p. 5). This behavioral outcome is similar to OCB, and researchers have likewise differentiated between interpersonal CWB (e.g., hurting employees in the organization) and organizational CWB (e.g., damaging the organization by taking its property without permission, intentionally working slowly or doing low-quality work) (Sackett et al., 2006).

The present study aims to examine: 1) the dark triad in healthcare organizations and nursing; and 2) the correlates of CWB and OCB in traditional Arab culture. Both aims are important because of the scarcity of studies on the dark triad in a healthcare setting, particularly in non-Western cultures (Liu & Cohen, 2018; Jonason et al., 2019; Syed et al., 2023). A future aim would be to clarify whether the correlates of CWB and OCB are similar in different cultures (Minkov, 2011). For example, Rizvi and Siddiqui (2023a) performed a meta-analysis in collectivist societies based on 100 original studies from 2013-2021 with 31,375 participants. They found that the personality trait most strongly associated with CWB is psychopathy, followed by Machiavellianism and then narcissism. They replicated this finding in Pakistan, a strong collectivist culture (Rizvi & Siddiqui, 2023b). Rizvi and Siddiqui (2023a) contend that their results are quite dissimilar to those of the meta-analysis by O'Boyle et al. (2012), who found that narcissism has the strongest association with CWB, followed by Machiavellianism and then psychopathy.

1.3 The Cultural Setting

Arabs form about one-sixth of Israel's population, being a permanent, non-assimilating minority who are clearly distinguished from Jews by place of residence and culture (Cohen, 2010; Cohen & Abedallah, 2021), and who continue to speak their language and adhere to their traditions (Cohen & Kirchmeyer, 2005). The culture of Israeli Arabs has been described as traditional collectivist (Cohen, 2010). Their collectivist orientation is expressed in certain values, such as solidarity, cooperation, mutual trust, support and sense of belonging, which are believed to characterize Arab society. In traditional societies, commitment to an organization is, in general, complex and influenced by the norms, sanctions and pressures of one's small group, notably the family and the community (Cohen & Kirchmeyer, 2005). Such societies prize values that may affect the workplace:

preference for more personal ties to superiors; acceptance of more paternalistic treatment; and a sense that power relationships should be hierarchical (Cohen, 2016). These values might shape the attitudes and behaviours of those members of traditional societies who become employees of organizations. If they can be encouraged to make a greater commitment to the organization, they may achieve a higher level of work performance and OCB together with a lower level of CWB (Abd El Majid & Cohen, 2015; Cohen & Abedallah, 2021).

2. Literature Review and Research Hypotheses

The conceptual framework of this study draws mainly on two theories: life history theory and social exchange theory (Min et al., 2019). Life history theory elucidates how individuals adopt different life strategies rooted in evolution. Those with a fast life strategy prioritize immediate rewards and resource gains, and thus focus on producing a larger number of offspring. In contrast, those with a slower life strategy are better able to defer gratification and rewards. These strategies vary among humans and are associated with personality traits, such as the dark triad. Individuals with elevated levels of dark triad traits are more inclined to exploit or mistreat others to achieve personal goals, often sacrificing long-term relationships for short-term gains. This fast life strategy may also lead them to engage in CWB to expedite their progress toward organizational rewards, such as promotions and income.

Conversely, social exchange theory posits that relationships are formed through exchanges of resources. Typically, people engage in such exchanges because social norms of reciprocity require them to give something in return for what they receive. Such exchange fosters positive relationships, with both parties sharing resources and engaging in reciprocal behaviour. However, individuals with high levels of dark triad traits tend to disregard reciprocity norms and social commitments (O'Boyle et al., 2012). They are also more likely to prioritize their own wants and needs, even at the expense of others. Consequently, exchange-based interactions will likely yield unfavourable outcomes for employees with high levels of dark triad traits.

Using these two theories, we will develop here a model of how the dark triad relates to CWB and OCB.

2.1 How the Dark Triad Affects CWB

This relationship is explainable within life history theory. CWB includes aggressive acts (Cohen, 2016); therefore, personality variables associated with aggressive behaviour should also be associated with workplace aggression and, more generally, with CWB (Penney & Spector, 2002). Specifically, psychopaths consider themselves exempt from the moral, ethical, social and legal rules that regulate society and seldom feel shame, regret, remorse or guilt. This mindset is found within the much larger population of sub-clinical psychopaths. Such individuals exhibit: 1) uncaring affect, due to an inability to sympathize or feel remorse when harming others; 2) interpersonal manipulation, due to unrestrained self-interest and a propensity to lie, cheat and manipulate; 3) and an unpredictable lifestyle, due to a propensity to behave impulsively and lack self-regulation. The last tendency likely contributes to an inclination toward criminal behaviour.

Psychopaths are known for their ruthlessness and emotional detachment when they harm others (Miao et al., 2023; Cohen, 2024). Their low levels of empathy make them less likely to care about people or feel a sense of commitment to their profession. They often deny accountability for their actions, believing that rules and laws do not apply to them. Consequently, individuals with high levels of psychopathy frequently engage in unproductive work behaviours, since they fail to adequately consider their surroundings or the consequences of their actions (Hassan et al., 2023). This indifference poses a significant threat to the organization and work team.

The psychological literature distinguishes between primary and secondary psychopathy. Primary psychopathy is thought to stem from a constitutional deficit that leads to callous and manipulative behaviour, superficial relationships and a lack of negative affect, such as guilt, fear or anxiety. Primary psychopaths plan their behaviour and socially rank themselves higher than others. In contrast, secondary psychopathy develops from environmental causes, such as parental abuse or rejection, which result in emotional difficulties associated with neuroticism, impulsivity, aggression and emotional reactivity. These disturbed emotional states often manifest in hostile reactivity, thus interfering with one's capacity for stable relationships and adaptive functioning (Del Gaizo & Falkenbach, 2008; Cohen, 2018, 2024).

Psychopathic leaders are prone to engaging in workplace bullying, unethical treatment and unfair practices. Their cold and often inscrutable demeanour in the workplace creates a challenging environment for coworkers and subordinates alike. Their predominant behavioural trait is anger, which instils fear in others but is not always overtly displayed. Employees tend to adopt avoidance strategies and often act on intentions to leave their jobs. Importantly, psychopathy has a substantial impact on CWB, as do all dark triad traits in both individualistic and collectivist cultures (Rizvi & Siddiqui, 2023). Therefore, one should expect a positive association between psychopathy and CWB (Scherer et al., 2013).

There are several arguments for a positive association between narcissism and CWB. First, because narcissists consider themselves highly important, they are willing to break the rules for personal benefit (Cohen, 2016, 2018, 2024). Second, narcissists perceive a broader range of incidents or circumstances as ego-threatening or frustrating because they strongly perceive themselves as being better than others. Third, highly narcissistic personalities often engage in such behaviours as theft, antagonism and non-violent crimes. Narcissists tend to be hypersensitive to adverse events primarily because they perceive themselves as victims and readily attribute malicious motives to others. These characteristics increase the likelihood of unproductive behaviours in the workplace, including anger, disruption and overt confrontation with coworkers (Hassan et al., 2023). Narcissists often mistrust their coworkers and can swiftly become irate and vindictive when they feel undervalued or not admired by those around them, the eventual outcome being unethical conduct and CWB (Miao et al., 2023; Cohen, 2024).

It is worth noting, however, that some researchers have argued against an entirely negative view of narcissism. They contend that narcissists may possess attributes that better equip them to navigate the challenges of the modern world (Rizvi & Siddiqui, 2023a)

Machiavellians feel it is normal to use aggressive, manipulative or exploitative methods to achieve their goals without considering the feelings, rights and needs of others (Cohen, 2024). This behavioral trait is often linked to a range of morally and ethically questionable behaviours that extend beyond conventional boundaries. Machiavellians are typically aggressive and abusive toward others, and even willing to resort to fraudulent practices to achieve their goals (Cohen, 2024). Moreover, they are more inclined to engage in CWB, including abuse, theft and sabotage (Hassan et al., 2023; Cohen, 2018). They are also more likely to engage in deception, including lying, stealing, fraud and deceit (Cohen, 2016, 2018). It can be argued that such individuals, who freely use unethical means to achieve their desired goals, have a stronger tendency to engage in unethical behaviour (Gürlek, 2021). Individuals with high levels of Machiavellianism are prone to highly manipulative CWB when confronted with obstacles to their goals (Miao et al., 2023). In such situations, they are callous and willingly engage in antagonistic and unethical behaviours (Liu & Cohen, 2018; Lyons, 2019).

Research findings, primarily from sectors outside healthcare, consistently support the connection between dark triad traits and CWB. In a meta-analysis of 37 studies, Ellen et al. (2021) discovered that the dark triad explains additional variance in both interpersonal and organizational CWB beyond the Big Five personality traits. Notably, it explains nearly twice the variance in

interpersonal CWB as does the Big Five. Liu and Cohen (2018) found that Machiavellianism had a substantial impact on both organizational and interpersonal CWB among physicians at large Chinese hospitals. Similar results were observed among nurses at two Chinese hospitals, with psychopathy having an additional impact on interpersonal CWB (Cohen & Liu, 2021).

Psychopathy, Machiavellianism and CWB were positively associated with each other in a sample of Turkish employees (Cohen & Özsoy, 2021). Dark triad traits were positively associated with CWB among 241 Portuguese employees (Junça-Silva & Silva, 2023). In two samples from Pakistan, a composite scale of dark triad traits was positively associated with CWB and negatively associated with OCB (Syed et al., 2023). Finally, all three of the dark triad were positively associated with CWB among 342 employees in Egyptian manufacturing (Elsawy et al., 2022).

We thus propose our first hypothesis (H1): *Dark triad traits are positively associated with CWB.*

2.2 How the Dark Triad Affects OCB and In-role Performance

Negative behavioral outcomes in OCB and in-role performance are most often explained through social exchange theory. Nonetheless, some researchers have wondered whether such outcomes are also due to dark triad personalities (Syed, Raja & Naseer, 2023). Given that employees who engage in OCB give priority to others over themselves, it may be expected that those with dark triad personalities will not engage in OCB because, among other things, they do not value social norms of reciprocity (Min et al., 2019).

Machiavellians emphasize manipulation and likewise give themselves precedence over others, including their organization. Therefore, they too should be less likely to engage in OCB and in-role performance, although they may put on public displays of good citizenship behaviour to create a positive impression (Szabó et al., 2018; Becker & Dan O'Hair, 2007; Lyons, 2019). Interestingly, Machiavellianism is associated with high levels of job commitment (AL-Abrrow et al. 2020).

Narcissists have a strong sense of entitlement, concentrate only on their benefit and do not value others; this may deter them from exercising their job responsibilities and engaging in helping behaviours, such as OCB. On the other hand, they are motivated to create positive impressions of themselves through soft tactics to satisfy their high identity needs (Szabó et al., 2018; Lyons, 2019). Because their behavioral trait is characterized by courage, creativity, love of freedom, willingness to ignore conventions and investment of emotional energy, some believe it to be closely associated with the emergence of leadership qualities. Narcissists may also be highly creative and adept in influencing others in the workplace (AL-Abrrow et al. 2020).

Psychopaths lack concern for others and are thus less likely to perform their job duties or engage in helping behaviours that advance the well-being of their organization and coworkers (Webster & Smith, 2019). They also have shorter-term time preference and lower identity needs. Therefore, they are not the best candidates for OCB (Szabó et al., 2018). Psychopathy is nonetheless positively associated with charisma and presentation style (AL-Abrrow et al. 2020).

Research findings have been mixed on how the dark triad relates to OCB. Narcissism and Machiavellianism were both negatively associated with OCB in a sample of 414 employees at four Iraqi public hospitals (AL-Abrrow et al., 2020). A study of Hungarian employees produced mixed findings: 1) psychopathy was negatively associated with OCB and in-role performance; 2) Machiavellianism was positively associated with organizational OCB and in-role performance, after controlling for the effects of other personality traits; and 3) narcissism was not associated with OCB and in-role performance (Szabó et al., 2018). In a sample of Polish organizations, different dimensions of psychopathy were negatively or positively associated with OCB (Sanecka, 2023). Finally, a composite dark triad scale was negatively associated with OCB among Pakistani public-sector employees (Salman Chughtai & Ali Shah, 2020).

We thus propose our second hypothesis (H2): *Psychopathy is negatively associated with OCB and in-role performance. Machiavellianism and narcissism are weakly or not associated with OCB and in-role performance.*

3. Methods

3.1 Respondents and Procedures

The target population was composed of Arab nurses from five healthcare facilities in the North of Israel. The five healthcare facilities consisted of three local hospitals and two retirement homes. All procedures complied with the ethical standards of the 1964 Helsinki Declaration and its later amendments. Three Helsinki Committees approved the study at the three hospitals (No. 26-21-EMMS; No. 245; No. 12/21). Informed consent was obtained from each respondent of the study, including those at the two retirement homes.

The nurses completed a questionnaire on dark triad traits, specifically on their in-role performance, organizational citizenship behaviour (OCB), counterproductive work behaviour (CWB) and demographic characteristics. Their supervisors (n=26) also completed a questionnaire on the nurses' in-role performance, OCB, CWB and demographic characteristics. The nurses wrote down their national identity number on the questionnaire to facilitate matching. The researchers could thus match the nurses' and supervisors' questionnaires. The supervisors had no access to the nurses' responses, and the nurses had no access to the supervisors' evaluations.

Four hundred and seventy questionnaires were circulated to the nurses at the five facilities. Usable questionnaires were returned by 267 of them (57%). The respondents received no compensation. A power analysis was conducted using SPSS to determine the minimum sample size to test both hypotheses. To achieve 80% power for detecting a multiple partial correlation coefficient of .30, at a significance level of $\alpha = .05$, we found that the minimum sample size should be $N = 145$ for the regression analysis. Thus, the obtained sample size of $N = 267$ was adequate to test both hypotheses. Given that all respondents were fluent in Hebrew, the original questionnaires were translated from English to Hebrew using translation and back-translation by speakers of Hebrew and English. The questionnaires were administered on-site.

The respondents were 75% female, and 38.9 years old on average. Their average tenure at the hospital and in the profession was 12.4 years and 14.9 years, respectively, with 81% being married and 93% having postsecondary education. The 26 supervisors were 61.5% female and 47.3 years old on average. Their average tenure at the hospital and in the profession was 19.5 years and 25.5 years, respectively, with 88.5% being married and 96.2% having postsecondary education.

3.2 Scales

We measured CWB on the two-dimensional scale of Bennett and Robinson (2000). Organizational CWB had twelve items (sample items: 1. *Littered the work environment*; 2. *Taken property from work without permission*), and interpersonal CWB had nine (sample items: 1. *Made fun of someone at work*; 2. *Cursed someone at work*). We measured OCB and in-role performance on three dimensions using the Williams and Anderson (1991) 21-item scale, with seven items per dimension. We used only six of the seven original scale items for nurse-reported OCB and supervisor-reported organizational OCB, and only five of the seven original items for nurse-reported organizational OCB. As for the dark triad, Machiavellianism was measured by 12 items from Monaghan et al. (2020). This scale was tried in two dimensions (tactics and views), but its reliability was acceptable only when we combined its items into one dimension. Narcissism was measured by the narcissistic personality inventory proposed by Raskin and Terry (1988) and tested by Gentile et al. (2013).

Finally, psychopathy was measured by a two-dimensional scale proposed by Levenson et al. (1995). Sixteen items measured primary psychopathy, and ten secondary psychopathy. All items were measured on a Likert scale from 1 to 7. In addition to the above measures, two control variables were included in the equations: tenure at the hospital (ratio variable) and gender (1 = male; 2 = female).

Table 1

Confirmatory Factor Analysis of Research Variables (N = 259-267)

Model	df	χ^2	χ^2/df	NFI	RFI	IFI	TLI	CFI	RMSEA
OCB - nurse-reported									
One-factor solution	27	154.40	5.72	.73	.55	.77	.60	.76	.13
Three-factor solution	24	64.48	2.69	.89	.79	.93	.86	.92	.08
OCB - supervisor-reported									
One-factor solution	27	173.98	6.44	.85	.74	.87	.77	.86	.14
Three-factor solution	24	61.14	2.55	.95	.90	.97	.94	.97	.08
CWB - nurse-reported									
One-factor solution	9	82.24	9.14	.93	.83	.93	.84	.93	.17
Two-factor solution	8	29.46	3.68	.97	.93	.98	.95	.98	.10
CWB - supervisor-reported									
One-factor solution	9	172.29	19.14	.87	.69	.87	.70	.87	.26
Two-factor solution	8	23.54	2.94	.98	.95	.99	.97	.99	.08
Dark triad									
One-factor solution	54	216.69	4.01	.79	.70	.84	.76	.83	.11
Three-factor solution	48	120.07	2.50	.89	.81	.93	.88	.93	.07

4. Results

Confirmatory factor analyses were performed to confirm the scales' dimensionality (Table 1). The findings in Table 1 show an acceptable fit for the factorial structure of the research variables. Some of the goodness-of-fit indices, particularly for the dimensionality of the three factors of the dark triad scales, are somewhat low but fit better than the alternative one-dimensional scale. Table 2 presents the descriptive statistics of the research variables and their intercorrelations. The results show that the variables meet an acceptable level of reliability. None of the correlations among the independent variables exceed .70, and there are few high correlations among the dependent variables. There is thus little possibility of multicollinearity in the data.

We used hierarchical linear modeling to examine the relationships between the dark triad and each dependent variable: the two OCBs (nurse-reported and supervisor-reported), the in-role variables and the two CWBs (nurse-reported and supervisor-reported). Table 3 presents the results of the hierarchical linear modeling.

4.1 How the Dark Triad Affects CWB

The results in Table 3 partially support the first hypothesis. As expected, secondary psychopathy is positively associated with organizational CWB (.18***; nurse-reported) and interpersonal CWB (.19***; nurse-reported). Primary psychopathy shows no significant associations. Unexpectedly, narcissism is negatively associated with organizational CWB (-.10*) and interpersonal CWB (-.14*; nurse-reported). As expected, Machiavellianism is positively associated with interpersonal CWB (.12*; nurse-reported) but not with organizational CWB (nurse-reported). The associations are weaker for supervisor-reported CWB, being significant only in the case of narcissism and supervisor-reported interpersonal CWB (.18). This association flips to negative for nurse-reported CWB.

Table 2

Descriptive Statistics, Cronbach's Alpha Reliabilities (in Parentheses), and Intercorrelations among Research Variables (N = 259–267)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Tenure	12.4	10.4																
2. Gender (1=male, 2=female)	1.77	.45	.16															
3. PrimaryPsycho	2.85	.77	-.13	-.18	(.77)													
4. SecondaryPsycho	2.93	.68	-.02	-.12	.58	(.62)												
5. Narcissism	4.00	.73	-.16	-.21	.50	.38	(.70)											
6. Mach	2.74	.69	-.11	-.12	.66	.54	.28	(.63)										
7. INROLEPer (NUR)	5.96	.63	.04	.04	-.18	-.23	.23	-.27	(.61)									
8. OCBorg (NUR)	5.24	.70	-.06	.14	-.41	-.40	-.10	-.31	.43	(.61)								
9. OCBint (NUR)	5.52	.73	-.03	-.03	-.07	-.18	.19	-.17	.55	.19	(.70)							
10. CWBorg (NUR)	1.33	.46	-.01	-.22	.23	.31	.04	.27	-.42	-.52	-.23	(.89)						
11. CWBint (NUR)	1.34	.50	.01	-.27	.21	.30	-.02	.27	-.38	-.48	-.23	.77	(.87)					
12. INROLEPer (SUP)	5.79	.81	-.06	.14	-.11	-.13	-.07	-.12	.14	.07	.13	-.14	-.08	(.62)				
13. OCBorg (SUP)	5.54	.82	.01	.15	-.11	-.14	-.16	-.10	.01	.09	.04	-.10	-.06	.66	(.62)			
14. OCBint (SUP)	4.83	.99	.01	.10	-.07	-.12	-.05	-.10	.13	.05	.23	-.11	-.14	.64	.40	(.81)		
15. CWBorg (SUP)	1.59	.62	.11	-.08	.07	.11	.10	.07	-.08	-.08	-.05	.17	.09	-.68	-.70	-.40	(.90)	
16. CWBint (SUP)	1.44	.77	.18	-.03	.14	.11	.17	.08	.01	-.06	-.02	.07	.13	-.47	-.54	-.31	.73	(.91)

Note: PrimaryPsycho = Primary psychopathy; SecondaryPsycho = Secondary psychopathy; Mach = Machiavellianism; INROLEPer (NUR); Nurse-reported in-role performance; OCBorg (NUR) = Nurse-reported organizational OCB; OCBint (NUR) = Nurse-reported interpersonal OCB; CWBorg (NUR) = Nurse-reported organizational CWB; CWBint (NUR) = Nurse-reported interpersonal CWB; INROLEPer (SUP) = Supervisor-reported in-role performance; OCBorg (SUP) = Supervisor-reported organizational OCB; OCBint (SUP) = Supervisor-reported interpersonal OCB; CWBorg (SUP) = Supervisor-reported organizational CWB; CWBint (SUP) = Supervisor-reported interpersonal CWB.

Note: In correlations above .125 $P \leq .05$; in correlations above .160 $P \leq .01$; in correlations above .210 $P \leq .001$

Table 3

HLM Analyses (estimates) of Demographic Variables and Dark Triad Scales for Organizational Citizenship Behaviour, In-role Performance and Counterproductive Work Behaviour (N = 259–267)

| Dependent variables | Organizational citizenship behaviour (OCB) | | | | | | Counterproductive work behaviour (CWB) | | | |
| | Nurse-reported | | | Supervisor-reported | | | Nurse-reported | | Supervisor-reported | |
Independent variables	In-role performance	Organizational OCB	Interpersonal OCB	In-role performance	Organizational OCB	Inter-personal OCB	Organizational CWB	Inter-personal CWB	Organizational CWB	Inter-personal CWB
Intercept	5.55***	6.65***	5.40***	5.93***	6.02***	5.27***	1.14***	1.42***	1.16***	.40
Demographic variables										
1. Tenure in the organization	.00	-.00	.00	-.00	-.00	.00	-.00	.00	.01*	.01***
2. Gender (1=male, 2=female)	.09	.16	-.01	.23*	.13	.17	-.18**	-.26***	-.15	-.05
Dark triad										
3. Primary psychopathy	-.12	-.31***	-.00	-.01	.11	.01	.04	.01	-.03	.06
4. Secondary psychopathy	-.20**	-.35***	-.24**	-.09	-.08	-.13	.18***	.19***	.06	.03
5. Narcissism	.38***	.21**	.31***	-.01	-.17*	.00	-.10*	-.14**	.09	.18*
6. Machiavellianism	-.14*	.02	-.14	-.02	-.06	-.11	.10	.12*	.03	-.02
2 log-likelihood	446.14	553.18	568.51	617.09	605.03	711.61	325.79	353.27	474.12	576.11

Note: * $P \leq .05$; ** $P \leq .01$; *** $P \leq .001$

4.2 How the Dark Triad Affects In-Role Performance and OCB

As predicted by the second hypothesis, primary psychopathy is negatively associated with nurse-reported organizational OCB (estimate--.31***). Similarly, secondary psychopathy is negatively associated with nurse-reported in-role performance (-.20**), organizational OCB (-.35***) and individual OCB (-.24***).

Unexpectedly, narcissism is positively associated with nurse-reported in-role performance (.38***), organizational OCB (.21**) and individual OCB (.31***). This is unexpected because the second hypothesis predicts that narcissism should not be associated with in-role performance or OCB. Another unpredicted finding is the negative association between Machiavellianism and in-role performance (-.14*).

These findings reveal a consistent pattern of associations between the dark triad and the two work outcomes (Table 3). The associations are more significant between the dark triad and the two behavioral outcomes when we use nurse-reported data, i.e., self-report, than when we use supervisor-reported data. Finally, there are interesting findings with the control variables. Gender is strongly associated with both forms of nurse-reported CWB, suggesting that women engage in less CWB. Tenure is positively associated with both forms of CWB.

5. Discussion

In this study, we used questionnaire data from Israeli Arab nurses to see how the dark triad may relate to OCB and CWB. We examined CWB and OCB separately as behavioral outcome variables, using nurse-reported and supervisor-reported data. We found that secondary psychopathy and narcissism are important determinants of OCB and CWB, whereas Machiavellianism is weakly associated with either behavioral outcome.

Secondary psychopathy is the stronger determinant of counterproductive work behaviour (CWB) (positive association) and organizational citizenship behaviour (OCB) (negative association). This finding strongly supports the results of Bucknall et al. (2015). When they assessed the dark triad traits of individuals in various healthcare fields, in comparison to the general population, they found that healthcare professionals score significantly lower on narcissism, Machiavellianism and psychopathy than the general population. Interestingly, they also found that nursing professionals exhibit significantly higher levels of secondary psychopathy than do other medical professionals. This finding might explain the strong effects of secondary psychopathy in the present study. Although Bucknall et al.'s (2015) sample was from a Western culture (UK), the strong effect of secondary psychopathy in that culture suggests that secondary psychopathy might be common among nurses in a wide range of cultures. Researchers should seek to replicate this finding in other cultural and occupational settings.

A strong relationship between psychopathy and CWB was also found by Cohen and Abedallah (2021) among Israeli Arab teachers. This relationship is consistent with psychopaths having a faster life strategy, while supporting the theory advanced by Schilbach, Baethge and Rigotti (2020). They argue that psychopaths are less able to follow goals and plan behaviour, and that disinhibitory propensities in secondary psychopathy foster negative cognitive appraisal patterns. They further assert that the dysfunctional appraisal propensities in secondary psychopathy are a precursor of negative emotionality. Negative emotions might manifest behaviorally as CWB.

We found positive associations between narcissism and the three forms of nurse-reported OCB, and a negative association between narcissism and supervisor-reported organizational OCB. The positive associations may be explained by a finding in Qureshi et al. (2015): narcissism is positively associated with OCB and in-role performance because narcissists wish to create a positive impression of themselves. Thus, when narcissists engage in OCB, they do so only to manage how others perceive them. Therefore, nurses with high levels of narcissism will likely not consistently go beyond their job description to perform positive actions for their organization and will do so only when such actions are compatible with their needs. Narcissists thus increase their OCB and in-role performance levels to improve their image and promote their interests. This explanation is further supported by the negative association between narcissism and supervisor-reported organizational OCB. Narcissism is also negatively associated with nurse-reported CWB, in line with the contention that narcissists are keenly aware that a collectivist culture more harshly punishes those individuals who violate group norms and harm the group (Grijalva & Newman, 2015).

Among the three dark triad traits, Machiavellianism is the one most weakly associated with behavioral outcomes. Only two of the ten associations are significant. A possible explanation is provided by Rehman and Shahnawaz (2018), who likewise found a weak association between Machiavellianism and CWB among managers in India. According to the two authors, individuals with high levels of Machiavellianism use impression management during job interviews to enhance their likelihood of getting hired and may engage in unethical behaviour if they deem it useful. Such impression management may be seen as part of a long-term plan with the ultimate aim of advancing in the organization, gaining more power and thus reducing one's chances of getting caught.

In general, the dark triad is more strongly associated with CWB and OCB when these outcomes are nurse-reported, rather than supervisor-reported. This stronger association supports Hart, Breeden and Richardson's (2019) suggestion that Machiavellianism, psychopathy and narcissism are used to manage impressions and gain rewards (or prevent punishment).

5.1 Practical Implications

We found that individuals with a dark triad personality, mainly those with secondary psychopathy, are significantly more at risk of engaging in CWB. To reduce this higher risk, an organization should take several practical measures. First, employees should be selected with a greater focus on identifying potentially disruptive personalities. For nurses, the focus should be on secondary psychopathy (Bucknall et al., 2015). Second, to deter CWB, incentives and disincentives should be put in place to promote a culture of restorative justice and ethics within both the organization and society at large. Third, all organization members should actively monitor and voice concerns about CWB. The organization should establish secure and accessible procedures for members to report such behaviours (Syed et al., 2023). Fourth, concrete safeguards should be in place to limit a supervisor's discretionary power to engage in destructive actions. Such controls would impose a normative pressure on employees to align their behaviour with accepted standards in the organization and the broader community (Krasikova, Green & LeBreton, 2013).

By detecting and assessing the dark triad in the workplace, it will become possible to develop interventions and policies to curb toxic behaviours and promote overall employee well-being and intrinsic motivation, thus fostering a healthier work environment, better job performance and higher productivity. It will also become possible to design appropriate employment policies and an appropriate work environment for employees who come from collectivist cultures, particularly through greater understanding of how loyalty to one's kin and ethnic group may affect the relationship between personality and employment-related factors (Gould, Barry & Wilkinson, 2015; Ahmed, 1978). Furthermore, organizations will be better able to detect internal threats, disloyalty and corrupt intentions (Lainidi et al., 2023). Finally, the positive association between narcissism and OCB suggests that managers should not view the elements of the dark triad solely in a negative light. In the right circumstances, these elements may promote favourable behavioral outcomes for both the employees and the organization (Al-Abrrow et al., 2020).

5.2 Implications for Nursing Management

Management should take measures to protect their organization from nurses whose destructive behaviours may undermine organizational effectiveness and lead to lower-quality patient care (Yao, 2019). Such measures can take the following forms. First, head nurses should detect dark personalities and take appropriate action to lessen adverse effects. Second, they should also curb negative behaviours by enforcing moral and ethical standards and by offering training programs to promote prosocial and altruistic behaviour within the organization (Li et al., 2020). Finally, managerial processes should become more transparent and accountable to reduce risks associated with dark triad personalities (Nigro, 2018).

Labrague et al. (2020) propose additional means to reduce toxic leadership behaviour among nurses. First, apprentice head nurses should receive mentoring, coaching and feedback from veteran nurses. Second, they should enrol in leadership training programs (see also Nigro, 2018). Third, they should undergo periodic appraisals of their performance to reveal their capacity for leadership. Fourth, it is essential to create an ethical hospital environment and screen prospective nurses for dark triad traits during the hiring process (Ali & Johl, 2020; Rizvi & Siddiqui, 2023a). Khan et al. (2020) recommend that the human resources department should thoroughly check the job candidate's résumé and references. Former employers may also provide information on the applicant's employment record. Fifth, there should be proper clinical treatment and psychological counseling for employees with dark triad personalities. Finally, by learning and understanding the destructive effects of such personalities on hospitals and other healthcare organizations, the human resources department should develop evidence-based interventions to deter employees from expressing their dark tendencies and thus prevent damage to the organization and its employees in the short and long term (Khan et al., 2020).

This study is not without its limitations. It was conducted in a specific culture and occupational setting. In addition, its cross-sectional design makes causal conclusions difficult to make. We therefore need to examine the causal relationships through objective data on longitudinal performance. It will then become easier to draw firm conclusions on the relationships between the dark triad, in-role performance, OCB, and CWB.

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