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Counterproductive Work Behaviors in a Saudi Tertiary Healthcare Organization

Adel Omar Bataweel[1*], Khalid Al Ghamdi[2], Fahad Al Ateeg[3]

[1]Patient Safety and Risk Management, Riyadh, Saudi Arabia
[2]Khalid AlGhamdi, Nursing, Riyadh, Saudi Arabia
[3]Fahad AlAteeg Administration, Riyadh, Saudi Arabia
Email: *adelbataweel@hotmail.com, *abataweel@kfmc.med.sa

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Abstract

Background: Counterproductive work behaviors, such as violence, and anti-social behaviors, such as bullying, are serious issues in healthcare. It can lead to poor patient care outcomes, loss of staff morale, and a decline in the organization's performance. This study explored nursing personality traits (Big Five Inventory [BFI]), primary and secondary psychopathy, and demographic data to determine whether victims and perpetrators of counterproductive behaviors have specific characteristics that distinguish them from others. Design: A cross-sectional, self-administered online survey was conducted with nurses in a Saudi tertiary healthcare organization. Methods: This study included all nursing staff (2400) with a simple random sample of n = 824. Participants completed an online self-report survey that included demographic information, followed by questionnaires to measure personality traits and primary and secondary psychopaths. Results: 46.5% of the nurses in the study were exposed to violence, 54.2% were exposed to anti-social behaviors such as bullying, and 16.7% were perpetrators of counterproductive behavior. Perpetrators had significantly lower agreeableness scores than other staff members, odds ratios (OR) 3.00 [95% confidence interval (CI) 2.17 - 4.15], and significantly higher openness scores (OR) 0.52 [95% confidence interval (CI) 0.35 - 0.79]. Victims of anti-social behaviors such as bullying had significantly lower scores for primary psychopathy (OR) 1.04 [95% confidence interval (CI) 1.02 - 1.06] and significantly higher scores for second psychopathy (OR) 0.96 [95% confidence interval (CI) 0.92 - 0.99], neuroticism (OR) 0.73 [95% confidence interval (CI) 0.57 - 0.95], and openness (OR) 0.66 [95% confidence interval (CI) 0.50 - 0.88] Conclusion: The study was unique in that it examined perceptions, actual behavior, and predictors using personality and psychopathy traits. Perpetrators had significantly lower scores in agreeableness compared to other staff, and they shared significantly high scores in

openness traits with the victims. Victims, on the other hand, had significantly high scores in secondary psychopathy and neuroticism. This study offered a global leadership solution through the effective use of a behavior committee.

Keywords

Personality Traits, Primary and Secondary Psychopathy, Bullying, Violence, Counterproductive Behavior, Behaviour Committee, Nursing

1. Introduction

A global, independent authority on healthcare technology and safety, ECRI, issued a report about ten top patient safety concerns for 2023, where the second top concern was violence in all its manifestations in healthcare (ECRI, 2023). Counterproductive work behavior can lead to poor patient care outcomes, loss of staff morale, and a decline in the organization's performance (Munro & Phillips, 2020; Westbrook et al., 2021). Bullying is one form of counterproductive behavior, and the prevalence is enormous. It cannot be ignored as the World Health Organization (WHO) labeled it a major global healthcare problem, where 60.3 million workers are affected every year (Hochstetler et al., 2020). Looking at individual countries can show the extent of this issue. For example, 84% of healthcare providers in the UK reported being bullied, costing the government 13 billion in healthcare in medical error, sick leave, burnout, attrition, and patient mortality (Munro & Phillips, 2020). In the US, 35% of workers exposed to bullying, representing roughly 53.5 million Americans (Lamberth, 2015); 89.4% of healthcare workers reported bullying in an Australian survey of seven hospitals (Westbrook et al., 2021), Sweden was 18.5% (Rahm et al., 2019), and 83.3% in China (Sun et al., 2017). In some African countries like South Africa, the prevalence could reach up to 100%, Egypt up to 86.1%, Ethiopia 58.2%, Nigeria up to 78%, Ghana 64.2%, Botswana 78.1%, and Congo 80.1% (Njaka et al., 2020). Saudi hospitals had similar picture where the city of Taif reported 94% of nurses said they experienced at least one type of violence (Ayasreh et al., 2015), 70% and of sampled residents in Riyadh city between 2017-2018 experienced some violence and bullying (Alahmari et al., 2020), 47.6% of surgical residents surveyed in multiple regions of Saudi suffered bullying (Albuainain et al., 2022), 28% of primary healthcare workers in Alhassa city experienced bullying (El-Gilany et al., 2010), 57.5% of healthcare workers experienced violence in Abha city study (Alsaleem et al., 2018), 48.6% reported exposure to violence in Arar city (Al Anazi et al., 2020), 46.9% in primary care centers in Dammam and Al Khobar (Alsmael et al., 2020) and almost the same in Riyadh primary care centres 45.6% (Al-Turki et al., 2016), 33.4% of nurses in a medical city tertiary care in Riyadh reported workplace bullying (Al Muharraq et al., 2022) and 90.3% of nurses in psychiatric hospitals in Saudi (Basfr et al., 2019).

There are essentially two factors in most studies if not all, that predicted workplace counterproductive behavior: working environment and individual characteristics like their personality traits (Nielsen & Einarsen, 2018; Hilton et al., 2022; Jang et al., 2022; Feijó et al., 2019). Both factors are essential. However, personality traits have a direct effect on counterproductive behavior, and the environment mediates it when the perpetrator sees that the environment allows it (Mahmood et al., 2021).

Victims of counterproductive behavior were found to be more introverted, more neurotic (anxious), more openness (open to new experiences, creative and imaginative), less conscientiousness, and less agreeable (Fernández-del-Río et al., 2021). On the other hand, perpetrators were found to have low scores in openness to experience, agreeableness, and conscientiousness and high scores in neuroticism and extraversion (Fernández-del-Río et al., 2021; Mullins-Sweatt et al., 2019). So there was an overlap between the victim and the perpetrator in low scores in conscientiousness, agreeableness, and high scores in neuroticism but differences in openness to and extraversion. Meta-analysis studies found that bullies had lower scores in agreeableness and high scores in extraversion and neuroticism, and victims had high neuroticism and low scores in conscientiousness (Mitsopoulou & Giovazolias, 2015; Nielsen et al., 2017). Other studies found victims to score low on agreeableness, and this irritated others as they perceived them as being more difficult (Nielsen & Knardahl, 2015). In general, low agreeableness individuals tended to show low altruism, low compliance, and low modesty (Seara-Cardoso et al., 2020).

Another important measure that was shown to predict bullying and aggressive behavior was psychopathy: primary and secondary. It was found that psychopathy was a robust predictor of counterproductive work behaviors and organizational citizenship behaviors like bullying, aggression, violence, unrestricted sexual orientation, lower sensitivity to deviations, and many other anti-social and anti-organizational behavior and corruption intention in the workplace (Welter Wendt & Jones Bartoli, 2018; Tokarev et al., 2017; Mushtaq & Rohail, 2021; Ellen III et al., 2021; Szabó et al., 2021; Parker, 2019; Moor & Anderson, 2019; Chiorri et al., 2019). Additionally, a psychopath leader will manage their staff by bullying, which would encourage staff to bully each other (Tokarev et al., 2017) and not support their employees (Spain et al., 2014). A study for world leaders comparing personality traits between autocrats and non-autocrats found that autocrat leaders (who do not listen to their team or seek input from others with over-controlling) had lower scores on agreeableness and higher scores on extraversion and psychopathy (Nai & Toros, 2020). Another study asserted a similar finding where they found agreeableness to be negatively correlated with psychopathy (Kowalski et al., 2021). Other studies found that bullying was associated with lower agreeableness, high extraversion, neuroticism, and high scores in psychopathy (Balakrishnan et al., 2019; Dåderman & Ragnestål-Impola, 2019; Van der Westhuizen, 2021). Others found only low agreeableness and high psychopathy were related to aggressive behavior (Scholz et al., 2022; Ellen III et al.,

2021).

Some studies looked at the two dimensions of psychopathy separately and found that the primary psychopathy (PP) dimension responsible for selfishness, callousness, and interpersonal manipulation was associated with low agreeableness, and the secondary psychopathy (SP) dimension accountable for impulsivity, instability, and anti-social behavior was related to low agreeableness, low conscientiousness, and high neuroticism (Lynam et al., 2005; Borroni et al., 2014; Spain et al., 2014). Therefore, psychopathy and low agreeableness were found to be strong predictors of interpersonal deviance (Ellen III et al., 2021). Additionally, high PP scores for leader/manager/supervisor were associated with negative subordinate attitudes and behavior, and it was recommended that organizations should not appoint anyone to a leadership position if they had high scores in PP (Petrisor et al., 2021). On the other hand, victims were found to have low levels of PP compared with normal individuals, which was an indication of low self-esteem to defend themselves, and it was recommended that victims should be paid attention more than bullies for any interventions as victims responded better than bullies to interventions (Walsh et al., 2018).

Finally, one of the important tools for victims to use is speaking up, but they need to perceive and trust that they can do this without being blamed, and the organization will take action; otherwise, they will not report (Westbrook et al., 2021; Jönsson & Muhonen, 2022; Thompson et al., 2020) and the study will discuss our Behaviour Committee as an effective solution for fostering trust among staff to report and speak up.

The objectives of the study will be:

Objective 1: Characteristics of victims and perpetrators of counterproductive behavior.

Objective 2: Factors that affected counterproductive behavior.

Objective 3: Personality Traits Vs Psychopathy (Primary and Secondary).

2. Method

2.1. Participants

Simple random sampling was used to recruit nurses from King Fahad Medical City (KFMC), Riyadh, Kingdom of Saudi Arabia. All KFMC nurses were included in this study.

Considering a total number of 2400 nurses, the online Raosoft sample size calculator (http://www.raosoft.com/samplesize.html) estimated a minimum sample size of 520 nurses to ensure a confidence level of 99% with a 1% margin of error as the topic was sensitive and required a more accurate sample. The total random sample number of responses was 1005, of which 181 were incomplete and 824 were complete.

2.2. Design

A cross-sectional, self-administered, online survey was conducted with all nurses

using the KFMC email system. The Qualtrics XM Platform survey tool was used for survey construction, and IBM SPSS Statistics (version 28) was used for analysis. Demographic data were collected. The survey then presented participants with 44 questions on personality trait measures and 26 on the Levenson Self-Report Psychopathy Scale.

2.3. Demographic

Gender, age, social status, marital status, time spent on social media, exercise habits, original nursing degree grade, leadership position, education level, years of experience, and years at the organization.

2.4. Procedure

Ethical approval was obtained from the Institutional Review Board of King Fahad Medical City. Nurses were asked to complete an online electronic survey to collect data on their personality and psychopathic traits. By clicking on the link or copying it into a web browser, the participants were brought directly to the study via Qualtrics.

The nurses were asked to complete an online electronic survey to collect data on the Big Five. The survey comprised the Big Five Inventory (BFI) of 44 items scored on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The BFI is a reliable psychometric inventory for measuring personality traits and has been translated into many languages worldwide with high reliability and validity (Li et al., 2015; Fossati et al., 2011).

Levenson Primary and Secondary Psychopathy (LPSP) scales were used to assess psychopathy (Levenson, Kiehl, & Fitzpatrick, 1995; Seara-Cardoso et al., 2020). The LPSP is a 26-item questionnaire on a 4-point scale, where 1 = (strongly disagree) and 4 = (strongly agree). It assesses different domains related to psychopathy in adulthood (i.e., primary and secondary psychopathy) and is widely used in non-clinical samples. Several studies have demonstrated the adequacy of the LPSP in terms of its psychometric properties in community samples (Hauck-Filho & Teixeira, 2014). The scale has high internal consistency (ranging from .63 to .85) and exhibits good construct, convergent validity, and test-retest reliability (Lynam, Whiteside, & Jones, 1999; Gordts et al., 2017).

2.5. Statistical Analysis

Descriptive analysis (frequency and percentage) was used to summarize categorical and continuous variables. Non-parametric tests were used because the data were not normally distributed. The only significant predictors of initiation of counterproductive behavior, exposure to violence, and anti-social behavior, such as bullying, in the non-parametric tests (Mann-Whitney test and Kruskal-Wallis) were entered into the multivariate stepwise backward Wald logistic regression analysis. Odds ratios and their confidence intervals (CIs) were also presented. Statistical significance was set at $p \leq .05$, considered statistically signifi-

cant.

2.6. Ethical Consideration

King Fahad Medical City's Institutional Review Board approved this study (IRB Log Number: 23-261) and in accordance with the Declaration of Helsinki. The participants' completion of the study questionnaires implied their consent to participate.

3. Results

3.1. Descriptive Statistics

Table 1 shows reported self-perception of nurses about themselves if they perceived themselves as victims, perpetrators or neither.

Table 2 shows nursing staff who initiated.

Table 3 shows nursing staff who were exposed to violence.

Table 4 shows nursing staff who were exposed to anti-social behavior like bullying.

Table 5 shows number of nursing staff that were aware of the Behavior Committee.

Table 6 shows nursing staff feedback about the Behavior Committee effectiveness in reducing counterproductive behavior in the organization.

Table 1. Self-Perception.

Self-Perception	Frequency	Percent
victims counterproductive behavior	194	23.5
Perpetrator of counterproductive behavior	55	6.7
Neither victims nor perpetrators of counterproductive behavior	575	69.8
Total	824	100.0

Table 2. Have you initiated any counterproductive behavior towards any staff?

Initiation of counterproductive behavior	Frequency	Percent
Yes	138	16.7
No	686	83.3
Total	824	100.0

Table 3. Were you exposed to any kind of violence?

Exposure to violence	Frequency	Percent
Yes	383	46.5
No	441	53.5
Total	824	100.0

Table 4. Were you exposed to any kind of anti-social behavior like bullying?

Exposure to anti-social behavior	Frequency	Percent
Yes	447	54.2
No	377	45.8
Total	824	100.0

Table 5. Have you heard about the behavior committee?

Behavior committee knowledge	Frequency	Percent
Yes	515	62.5
No	309	37.5
Total	824	100.0

Table 6. Do you believe that the presence of the behavior committee in the organization helped in reducing the incidents of anti-social behavior like violence and bullying?

Behavior committee effectiveness	Frequency	Percent
Yes	466	56.6
No	68	8.3
Not Sure	290	35.2
Total	824	100.0

Table 7 shows nursing staff feedback about the Behavior Committee reporting to the CEO directly.

Table 8 shows the nursing staff opinion on other organizations having Behavior Committee from their experience with it.

Table 9 shows nursing staff feedback on solutions to combat counterproductive behavior.

3.2. Preliminary Analysis

Table 10 shows internal reliabilities of the primary psychopathy, secondary psychopathy and personality traits scales.

3.3. Primary Analysis

Objective 1: characteristics of victims and perpetrators of counterproductive behavior

Table 11(a) shows the characteristics of the perpetrators and victims of both violence and bullying. Perpetrators had significantly lower scores in agreeableness and significantly higher scores in openness compared to other staff. Victims of both violence and bullying had significantly higher scores in neuroticism, openness, and secondary psychopathy, but they had significantly lower scores in primary psychopathy.

Table 11(b) shows the primary psychopathy scores for the perpetrators

Table 7. Should the behavior committee report to the CEO?

Behavior committee reporting to the CEO	Frequency	Percent
Yes	495	60.1
No	40	4.9
Not Sure	289	35.1
Total	824	100.0

Table 8. Should other organizations have a behavior committee?

Behavior committee for other organizations.	Frequency	Percent
Yes	512	62.1
No	52	6.3
Not Sure	260	31.6
Total	824	100.0

Table 9. Suggestions to deal with counterproductive behavior?

Suggestions	Frequency
The presence of a behavior committee reporting to the CEO that really can be trusted when we speak up	585
Clear and enforced policy on Penalties for perpetrators known to all and supported sincerely by high administration	485
Clear policy caring for victims	425
Availability of security personnel to stop physical aggression	417
Training on violence and bullying prevention and control	348
Liaison with police for physical/sexual aggression	233

Table 10. Internal reliability statistics?

Variables	Cronbach's Alpha	N of Items
Primary Psychopathy Scale	.815	16
Secondary Psychopathy Scale	.770	10
Personality Traits Scale	.918	44

compared to other staff. Perpetrators had significantly higher scores than other staff.

Objective 2: Factors that affected counterproductive behavior

Tables 12-14 show factors that were significantly associated with perpetrators and victims.

Table 12 shows factors related to perpetrators where they were at significantly higher scores for making clinical errors. They also had self-perception about themselves as perpetrators, which was also significant, and they did not feel secure at their jobs. They also had significantly negative perceptions about their

Table 11. (a) Characteristics of staff that initiated counterproductive behavior, exposure to violence and anti-social behavior like bullying? (b) Primary psychopathy in the perpetrators.

(a)

Variables	Characteristics	Exp (B)	95% C.I. for EXP (B)	Sig.
Initiation of counterproductive behavior (e.g., violence or bullying)	Agreeableness	3.00	2.17 - 4.15	<.001
	Openness	.52	.35 - .79	.002
Exposure to violence	Primary Psychopathy	1.04	1.01 - 1.06	.002
	Secondary Psychopathy	.96	.93 - 1	.037
	Neuroticism	.71	.54 - .92	.010
	Openness	.69	.51 - .94	.018
Exposure to Anti-social behaviour like bullying	Primary Psychopathy	1.04	1.02 - 1.06	<.001
	Secondary Psychopathy	.96	.92 - .99	.018
	Neuroticism	.73	.57 - .95	.017
	Openness	.66	.50 - .88	.005

(b)

Variables	Characteristics	Exp (B)	95% C.I. for EXP (B)	Sig.
Initiation of counterproductive behavior (e.g., violence or bullying)	Primary psychopathy	.964	.942 - .987	.002

immediate manager. When asked about their perception of the organization and if violence or bullying existed, they seemed to believe that there were none. They also had a negative opinion about the Behaviour committee.

Table 13 shows victims who were exposed to violence. Similar to the perpetrators, the victims had negative perceptions about their immediate manager and were more prone to making clinical errors. They had the self-perception that they were victims in the organization and had a lower job security perception. They also had significantly higher scores on intention to leave. They had significantly higher scores of having chronic disease. They acknowledged they were anxious people and they would speak up for themselves if subjected to violence and had positive opinions about the Behaviour Committee; as they responded they would report to it.

Table 14 shows victims who were exposed to bullying. Victims of bullying had similar self-perceptions as victims of violence, where they thought of themselves as victims of bullying. They also had a negative sense of job security and had more intention to leave as victims of violence. They also had more chance of

Table 12. Significant predictors of staff initiating counterproductive behavior.

Factors	Exp (B)	95% C.I. for EXP (B)	Sig
Self-Perception	.693	.465 - 1.032	.071
Job Security	.645	.447 - .932	.019
Error Making	2.175	1.334 - 3.546	.002
Immediate manager perception	.401	.235 - .686	<.001
Any anti-social behavior like bullying in the organization	1.876	1.215 - 2.896	.005
Any anti-social behavior like violence in the organization	1.654	1.136 - 2.407	.009
Self-Perception	.492	.250 - .970	.041
Speaking up for oneself for anti-social behavior like bullying	.543	.321 - .916	.022
Effectiveness of the Behaviour Committee	.458	.252 - .834	.011
The behavior committee reporting to the CEO	.293	.148 - .582	<.001

Table 13. Significant predictors of being exposed to violence.

Factors	Exp (B)	95% C.I. for EXP (B)	Sig
Self-Perception	.378	.274 - .523	<.001
Job Security	.378	.274 - .523	<.001
Intention to leave	2.232	1.669 - 2.985	<.001
Exercising	.674	.484 - .939	.020
Chronic Disease	1.680	1.259 - 2.242	<.001
Error Making	2.090	1.348 - 3.239	<.001
Immediate manager perception	.581	.431 - .784	<.001
Any anti-social behavior like bullying in the organization	4.957	3.542 - 6.938	<.001
Any anti-social behavior like violence in the organization	8.084	5.901 - 11.076	<.001
Are you an anxious person	1.967	1.399 - 2.766	<.001
Speaking up for oneself if subjected to violence	1.563	.988 - 2.474	.057
Speaking up for a known colleague	.747	.564 - .990	.043
Speaking up for an unknown colleague	.681	.515 - .899	.007
Reporting anti-social behavior like bullying	2.267	1.358 - 3.785	.002

Table 14. Significant predictors of being exposed to anti-social behavior like bullying.

Factors	Exp (B)	95% C.I. for EXP (B)	Sig
Self-Perception	.306	.216 - .433	<.001
Job Security	.374	.281 - .497	<.001
Intention to leave	2.003	1.506 - 2.663	<.001
Religious level	1.478	1.116 - 1.958	.006
Chronic Disease	1.438	1.076 - 1.923	.014
Error Making	1.899	1.209 - 2.984	.005
Immediate manager perception	.416	.307 - .564	<.001
Any anti-social behavior like bullying in the organization	7.245	5.177 - 10.138	<.001
Any anti-social behavior like violence in the organization	5.505	4.081 - 7.427	<.001
Are you an anxious person	2.123	1.493 - 3.019	<.001
Speaking up for oneself if subjected to violence	1.987	1.261 - 3.130	.003
Speaking up for oneself for anti-social behavior like bullying	1.490	.951 - 2.334	.082
Speaking up for an unknown colleague	1.490	.951 - 2.334	.082
Reporting anti-social behavior like bullying	2.478	1.381 - 4.445	.002

Table 15. Spearman correlations between psychopathy scales with Big Five Inventory (BFI) personality traits scales.

	Primary Psychopathy	Secondary Psychopathy	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Primary Psychopathy	1.000	.556**	−.109**	−.479**	−.436**	.257**	−.213**
Secondary Psychopathy	.556**	1.000	−.171**	−.492**	−.480**	.433**	−.188**
Extraversion	−.109**	−.171**	1.000	.283**	.364**	−.336**	.365**
Agreeableness	−.479**	−.492**	.283**	1.000	.749**	−.469**	.444**
Conscientiousness	−.436**	−.480**	.364**	.749**	1.000	−.499**	.497**
Neuroticism	.257**	.433**	−.336**	−.469**	−.499**	1.000	−.180**
Openness	−.213**	−.188**	.365**	.444**	.497**	−.180**	1.000

Note: **$p < .001$.

having chronic diseases, were prone to error-making, and had a negative perception of their immediate manager as victims of violence. Unlike victims of violence, victims of bullying were found to be significantly less religious. Similar to the victims of violence, victims of bullying would report to the Behaviour Committee and would speak for themselves.

Objective-3: Personality Traits vs. Psychopathy (Primary and Secondary)

Table 15 shows the correlation between primary and secondary psychopathy

and the Big Five personality traits. Additionally, it shows the correlation between the personality traits themselves and between the primary and secondary psychopathy. There was a consistent negative correlation between both primary and secondary psychopathy and all personality traits except neuroticism. Both primary and secondary psychopathy correlate positively with each other. Similarly, there was a consistent negative correlation between neuroticism and the other four personality traits.

4. Discussion

Tables 1-9 show nursing staff feedback on specific questions. Table 10 shows the reliability of the scales used. When participants were asked how they perceived themselves (victims, perpetrators, or neither), 23.5% saw themselves as victims and 6.7% as perpetrators (Table 1). However, when they were asked if they actually initiated any counterproductive behavior 16.7% confirmed they did (Table 2). Almost half of the nurses in the study were exposed to counterproductive behaviors such as violence (Table 3) and anti-social behaviors such as bullying (Table 4). There was almost a 50% difference between victims' perceptions and actual behavior, which could be attributed to the environmental factors that could have been imposed on both victims and perpetrators when the situation was permitted, in addition to the genetic factors of the personality trait. Tables 5-8 showed positive responses from nursing staff about the Behavior Committee and they would recommend it as an effective solution to counterproductive behavior. They even reported the Behavior Committee as number one solution for counterproductive behavior (Table 9).

In this study, perpetrators were found to be low in agreeableness and high in openness compared to others (Table 11(a)). On the other hand, victims were found to be high in openness, neuroticism, and secondary psychopathy and low in primary psychopathy, which is valid for victims of both counterproductive behaviors (e.g., violence and bullying).

Let us first discuss openness, as it is shared among both victims and perpetrators, an exciting finding that requires explanation and understanding. A recent study of white, black, and Hispanic Americans examined racial homophily in friendship networks and which personality traits were predictors of heterophily, making some people interact with others from other racial backgrounds (Gordts et al., 2017). High openness was the only predictor of a person's propensity to mix and interact more with others apart from their race. As our context is negative, from counterproductive behavior, this could offer one explanation where victims with high openness mixed many different people who were not similar to their culture, which could have caused some friction due to total unfamiliarity with other people's culture, causing sensitivity and even anger towards the victims. As for the perpetrator, it made sense, as they needed to be seen as open and able to mix with many different people to choose suitable prey. Other studies explored high openness and found them consistently pursuing more diverse ex-

periences. They are drawn to new and unique things (Lynam et al., 2005), which in our context could cause problems, as they might not be conservative enough to whom they are drawn. Another study identified the genetic and brain mechanisms underlying trait openness and found that this trait is linked to creativity and mental health, especially in bipolar disorder and schizophrenia (Sahrah et al., 2023; Lo et al., 2017). This could also explain why high openness could lead to an unusual shift in mood, anti-social and aggressive behavior, impatience, distraction, and irritability, leading to the person being either a victim or perpetrator of counterproductive behavior (Smeland et al., 2017).

Looking now at the other trait of perpetrators, low agreeableness (**Table 11(a)**), they were three times less agreeable than non-perpetrators. Low agreeableness is associated with less sympathy, cruelty, irritable, cold, and very judgmental of other people's actions, which makes them feel less guilty or empathetic towards harming or abusing others (Latipah, Kistoro, & Putranta, 2021), callus antipathy towards others, not aware of others' needs and feelings, the entitlement to use others for their self-enhancement, and proactive and reactive aggression and anti-social behavior (Levine et al., 2021). Not surprisingly, low agreeableness is associated with perpetrators of anti-social behaviors such as bullying, and our finding aligns with other studies (Vize, Miller, & Lynam, 2021). Additionally, lower agreeableness in nursing was associated with more error-making, as they lacked self-control (Bataweel & BinOthaimeen, 2023). This is in line with our study, where perpetrators had a higher rate of error-making, which was more than twice as likely as others (**Table 12**).

Interestingly, most studies found primary psychopathy to be a predictor of initiation of workplace counterproductive behaviors, such as bullying (Bataweel, 2023). However, our study used the five dimensions of personality traits and two dimensions of psychopathy compared to other studies that investigated either the dark triad (Machiavellianism, Psychopathy, Narcissism) or psychopathy (primary and secondary) alone. When we compared only primary psychopathy with the initiation of counterproductive behavior, we found that perpetrators had significantly higher traits in primary psychopathy than other staff members, which is in line with other studies (Welter Wendt & Jones Bartoli, 2018), as primary psychopathy was filtered when backward regression was performed to give us only the two traits of agreeableness and Openness (**Table 11(b)**). Primary psychopathy is characterized as manipulative, proactive aggression (compared with secondary psychopathy, which is reactive aggression), callousness, lack of empathy and fear, and is not as anxious as secondary psychopathy, interpersonal manipulation (Bataweel, 2023), and more utilitarian in judgment where they would sacrifice and hurt people for an outcome that would serve them and hurt others with no emotional disgust (Li et al., 2020). In support of this argument, some studies found psychopathy and Machiavellianism negatively and significantly correlated with agreeableness (Laurijssen et al., 2023). Other studies have also found a significant association between low agreeableness and high primary

psychopathy (Balakrishnan et al, 2019), which aligns with our study (**Table 15**). Low agreeableness has also been associated with autocratic leadership, which strengthens the point of screening candidates for leadership positions as autocratic leadership and/or low-agreeable leaders are predictors of workplace bullying (Hoel et al., 2010). Low agreeableness is associated with less commitment to the organization's goals; only personal goals are less altruistic, uncourteous, and uncivil (Leephaijaroen, 2016). In addition, low agreeableness is associated with the inhibition trait (Weinschenk & Dawes, 2018), has little regard for others to achieve their goals, and is associated with perpetrating counterproductive workplace behaviors such as bullying (Täuber & Mahmoudi, 2022).

The above results were also confirmed by different studies, but indirectly and only by the conclusion. Machiavellianism was a strong predictor of a bully, together with Grandiose Narcissism. Vulnerable narcissism was a predictor for victims of counterproductive behavior (Jang, Kim, & Lee, 2023; Khan et al., 2023). It was recommended that organizations screen for this trait before hiring because of its negativity in the workplace (Jang, Kim, & Lee, 2023). It was also found that low agreeableness was strongly associated with Machiavellianism and Grandiose Narcissism, perpetrators, and high neuroticism was strongly related to vulnerable narcissism, as was the case for victims (Pilch & Turska, 2015).

For victims, neuroticism was higher than others in both violence and bullying victims (**Table 11(a)**), which is in line with other studies of workplace counterproductive behavior as a predictor of exposure to violence and bullying (Fernández-del-Río, Castro, & Ramos-Villagrasa, 2022). High neuroticism is associated with anxiety, easy stress, and mood alteration, which are cynical to colleagues, irritability, poor sleep quality, exaggerated reactions to stressful situations, increasing the risk of conflicts, making them easier targets for bullying and exposure to violence, and being unhappy with life in general (Jahanzeb, Fatima, & De Clercq, 2021). It was also found that victims of both violence and bullying had a higher rate of intention to leave the organization (Akram et al., 2019), which is in line with our study of both victims (**Table 13** and **Table 14**), showing that they are twice as likely to leave than are non-victims. Additionally, it was demonstrated that these victims had lower working performance, less ability to resolve task problem solving (Cuartero & Tur, 2021), and more mind-wandering during cognitive tasks with poor attention and working memory capacity, which dispose them to make more errors (Robison, Gath, & Unsworth, 2017). Functional MRI imaging showed that a lack of self-control, conflict monitoring, cognitive control, error detection, and executive functions in the prefrontal region is responsible for the variation in neuroticism; thus, with high neuroticism, this region has less control over the limbic structures, causing hyper-arousal, especially in the amygdala (Liu et al., 2021; Kolla, Boileau, & Bagby, 2022), which is also in line with our study, where exposure to violence and bullying had a higher rate of making errors (**Table 13** and **Table 14**). It was also found that exposure to counterproductive behaviors such as violence or bullying and high neuroticism

increases the risk of depression (Rudkjoebing et al., 2021) and is more likely to have chronic diseases (Weston et al., 2020), which is in line with our study, where exposure to violence or anti-social behaviors such as bullying was more likely to have chronic disease (**Table 13** and **Table 14**). Apart from chronic diseases, high neuroticism shares a genetic correlation with anti-social behavioral disorders (Tielbeek et al., 2017) and can also increase mortality risk (Jokela et al., 2020). High neuroticism was also associated with fewer exercise habits and less adherence to medical treatment (Ferretti et al., 2022). In our study, staff members exposed to violence were less likely to have good exercise habits (**Table 13**). It is recommended that organizations, especially healthcare and nursing organizations, should identify such traits in their employees. They should not be in a leadership position as high neuroticism significantly predicts unauthentic leadership and feeling inferior to others. Their perception of stress is excessive compared to others, which could cause negative consequences for themselves and others during stressful times like the COVID-19 pandemic (Suprapto, Linggi, & Arda, 2022).

Contrary to our study, one study on victims of workplace bullying found that the significant traits were low agreeableness and high conscientiousness (Lind et al., 2009). The explanation for this could be that their participants were homogeneous and of the same ethnicity and nationality (Norway); their differences were minimal to the point that the authors did not find the results generalizable, and even though they measured personality traits, they used different psychometric tests. Similarly, two other studies from Pakistan (Bashir & Hanif, 2019; Shoukat & Hameed, 2019) had similar results for low agreeableness and used the same psychometric test as the study (Lind et al., 2009) and again with participants of homogeneous ethnicity. However, they found that neuroticism was also a significant predictor of exposure to counterproductive behavior, similar to our study. However, another Polish research using the same psychometric test as these controversial studies (Lind et al., 2009; Bashir & Hanif, 2019; Shoukat & Hameed, 2019) found only neuroticism to be the predictor of exposure to counterproductive behavior at work (Gamian-Wilk & Bjorkelo, 2019), which is in line with our study and the majority of studies. This result and other results on neuroticism as a predictor are also strengthened in our research by the significance of secondary psychopathy, which shares the same characteristics as neuroticism (Saltoğlu & Uysal Irak, 2022).

Psychopathy is linked to anti-social behavior and aggression; however, there are differences between primary and secondary psychopathy. For example, in our study, victims had high scores for secondary psychopathy and low scores for primary psychopathy (**Table 11(a)**). This finding is consistent with the characteristics of these two constructs. Secondary psychopathy has a positive relationship with reactive aggression, anxiety, disinhibition, easy distraction, poor performance and planning, anti-social behavioral traits, anger rumination, poor emotional regulation, depression, and neuroticism (Walker et al., 2022), which

explains why the victims in our study also had high neuroticism (**Table 11(a)**). Some studies see neuroticism as a trait distinguishing between primary and secondary psychopathy by being low in primary psychopathy and high in secondary psychopathy (Yildirim & Derksen, 2015).

Additionally, secondary psychopathy is associated with prefrontal cortex malfunction and serotonin deficiency, which causes neuroticism and reactive aggression (Yildirim & Derksen, 2015). It has also been shown that secondary psychopathy with high scores is associated with high scores on neuroticism (Gallant-Roman, 2008) and increases the likelihood of being exposed to violence (Lambert, 2021), which is in line with our study (**Table 11(a)**). On the other hand, primary psychopathy lacked anxiety in general (Patrick, 2014), which is why our victims had a lower primary as they were more anxious, which is in line with other studies (Walsh et al., 2018). This is also confirmed by our results, where both victims of counterproductive behavior perceived themselves as anxious (**Table 13** and **Table 14**), and victims who were exposed to anti-social behaviors such as bullying perceived themselves as victims (**Table 1**), which is in line with other studies (Vie, Glasø, & Einarsen, 2011).

Staff exposed to violence or anti-social behaviors such as bullying had a negative relationship with their immediate manager (**Table 13** and **Table 14**), which could have been caused by their higher scores in secondary psychopathy, as shown in other studies (Joubert, 2022). Additionally, they had more intention than others to leave the organization (**Table 13** and **Table 14**); similarly, secondary psychopathy was shown to be a driving force for turnover intention (Joubert, 2022). It is recommended that organizations screen out job candidates and employees for such traits and address them accordingly, as they can negatively affect staff and the organization before the spread of aggression, risky decision-making, ethical and anti-social behavior, and being victims of counterproductive behavior (Joubert, 2022). We agree with this recommendation, as this study found victims to have unfavorable perceptions and thoughts, such as feeling unsafe in the organization, which is also in line with other studies (Alquwez, 2023), being less likely to speak up for other colleagues in times of counterproductive behavior, and not feeling secure in their job (**Table 13** and **Table 14**), which is in line with other studies (Glambek, Skogstad, & Einarsen, 2018).

One of the essential factors for counterproductive behavior in the workplace identified in our study is leadership. Leadership has either a positive or negative impact on this issue. Good, engaged leadership can reduce the effects of damaging, counterproductive behavior in the workplace (Liu et al., 2023). In our study, staff with negative feelings or perceptions about their immediate manager had a higher chance of being exposed to violence or anti-social behaviors, such as bullying (**Table 13** and **Table 14**).

Another interesting point is the religious factor. Our study found that staff exposed to anti-social behaviors such as bullying were less religious than non-victims (**Table 14**). One should not think of this as a causal relationship; it is

only a significant association, so it is unclear which one affects the other, if any. One explanation could be that both victims of bullying with specific personality traits, psychopathy, and religiosity were caused by the same gene or a particular brain lesion. For example, in our study, victims were high in Openness (**Table 11(a)**) and low in the level of religiosity (**Table 11(a)**), which is in line with other studies (Joshanloo, 2023; Szcześniak, Sopińska, & Kroplewski, 2019) However, one study found that religiosity was higher in primary psychopathy than in secondary psychopathy (Gallup, 2020), which is in line with our study (**Table 13** and **Table 14**). Additionally, the area of the brain associated with secondary psychopathy is the ventromedial prefrontal cortex (vmPFC) (Koenigs, 2012), which is also related to religious beliefs (Zhong et al., 2017). Therefore, although our study and others showed low religious levels in secondary psychopathy as an association, the explanation for this is that they are affected by the same area in the brain.

Finally, as a solution, our organization established the Behavior Committee. This committee has all executive directors as members, one senior staff member as a chairman, and another senior staff member as a co-chairman, both of which are independent of any other administrations to reduce biases and report directly to the CEO for support. The flow of the process is through confidential reporting, which is dealt with by the co-chairman, who will deal with the incident to mediate and council if possible and ensure that the issue is resolved. If the matter requires more input, the chairman is involved, and the chairman and co-chairman work together for an appropriate solution. They would call upon any executive director or CEO if needed. The committee gained the popularity, trust, and confidence of the staff, especially the nursing staff, as we dealt with the issue immediately. 62.5% reported hearing of the committee (see **Table 5**). Of the respondents, 56.6% believed the committee was influential, 8.3% reported it was ineffective, and 35.2% were unsure, as they did not experience direct interaction with the committee (**Table 6**). When the staff was asked if the committee should report to the CEO for extra authority and issue resolution, 60.1% answered yes, 4.9% reported no, which could be from the perpetrators, and 35.1% reported no previous interaction with the committee (**Table 7**). The staff were also asked if they would recommend the committee to other organizations: 62.1% said yes, 6.3% said no, and 31.6% said not sure (**Table 8**). In our regression analysis, some explanations for this feedback were more precise. **Table 12** shows the perpetrators, who were significantly less likely to support the idea that the committee should be reporting to the CEO and that they were significantly against committee effectiveness, which is for obvious reasons as they were affected by it. Victims were twice as likely to utilize the committee and report violence (**Table 13**) or anti-social behaviors such as bullying (**Table 14**), encouraging them to speak up for themselves. However, one of the interesting findings was that staff exposed to anti-social behaviors, such as bullying, would be more likely to speak up for unknown colleagues (**Table 14**) but not those exposed to violence (**Table 13**). The only explanation could be that bullying felt more de-

structive and systematic than violence, could happen in the spare of the moment and die away. Still, bullying is continuous and had a harsher impact, so victims felt they would need to support other victims of bullying.

5. Conclusion

This study investigated a serious and chronic issue in healthcare: counterproductive behaviors such as violence and anti-social behaviors such as bullying. Perpetrators and victims had certain traits that distinguished them from others, and organizations should invest in helping and supporting such individuals. The study identified crucial points lacking in many organizations that negatively facilitated this behavior, namely leadership.

The study was unique in that it examined perceptions, actual behavior, and predictors using personality and psychopathy traits so that organizations could have wide measures to help them identify issues more conveniently and focus on their intervention. Additionally, it offers a global leadership solution through the effective use of a behavior committee.

There are limitations to self-report studies. To reduce the effect of this limitation, we used multiple approaches to consolidate different outcomes using direct questions, perceptions, actual behavior, and trait measures. Another limitation is the use of only nurses, and even though counterproductive behavior was more prevalent among them, we cannot generalize the findings to other healthcare providers, such as physicians and pharmacists. The strength of this study was that it included all nursing nationalities and areas.

Conflict of Interest Declaration

The authors declare that they have no affiliations with or involvement in any organization or entity with any financial interests in the subject matter or materials discussed in this manuscript.

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