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An Evaluation of Suicidality and Its Predictors in Police Officers in Lagos, Nigeria

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Abstract

Background: The many dangers and stressors associated with police work often place police officers at a great risk of a variety of mental health morbidity, including suicidality. The causation of suicidality is multi-dimensional, however, there are insufficient studies which have examined the burden and risk factors of suicidality in Nigerian police officers. **Objective:** To determine the prevalence and predictors of suicidality among police officers in Lagos, Nigeria. **Methods**: This was a cross-sectional study of 600 police officers who were selected using a non-probability sampling method. Questionnaires used were: Suicide Behaviour Questionnaire-Revised (SBQ-R), State-Trait Anxiety Inventory (STAI), and a Socio-Demographic Questionnaire. **Results:** Prevalence of suicidality was 14%, and the predictors of suicidality were: state anxiety ($p < 0.001$), trait anxiety ($p < 0.001$), substance use ($p = 0.03$), being unmarried ($p = 0.03$), and female gender ($p = 0.02$). **Conclusion**: Suicidality is prevalent among Nigerian police officers, with a higher risk in those who are vulnerable. The creation of government policies and infrastructure which promote mental health in police officers is necessary.

Keywords

Police Officers, Suicidality, Predictors, Mental Health, Evaluation

1. Introduction

Suicidality is the risk of suicide in an individual, as indicated by the presence of suicidal ideation, plans, gestures, or attempts. [1] Nowadays, more attention is being paid to the concept of suicidality among the general population, with some emphasis on examining suicidal ideations and behaviors among law enforcement personnel, such as, police officers. [2] Suicidality could occur as a solitary

mental health problem, or as an accompanying symptom of mental disorders like: depression, anxiety disorder, post-traumatic stress disorder, and substance abuse. [2] [3] [4] [5] It has been suggested that suicidality should be regarded as an epidemic among police personnel, [6] [7] in some settings, police officers have reported higher levels of suicidality compared to the general population. [3] [8] [9] [10] [11] Indeed, it is ironic, with the Nigerian law which still considers attempters of suicide a crime, yet police officers who are expected to prosecute suicidal persons, also have suicidal tendencies. Also, it is a serious cause for concern that statistics for suicidality appear to be rising steadily among police officers, who are charged with the responsibility of protecting lives and property within the community. [2]

Despite the significant prevalence of suicidality among officers of the police force, most cases may be largely undetected for various reasons. For instance, taking into account the tedious nature of police work, officers may require some degree of "macho" persona which unfortunately does not allow for any display of weakness or help-seeking behavior in the event of emotional distress. [12] Adding to that, comparable to most occupational groups, mental illness is still very much stigmatized in police settings, consequently, this may promote non-disclosure of psychiatric morbidity such as: suicidal ideations or suicidal behavior from affected officers. [13] The aforementioned factors may result in underreporting of suicidality, persistence of symptoms, and in time, lead to absenteeism, negligence, and declining work performance among police officers.

In general, the predictors of suicidality in police officers are quite similar to that of the general population, and may be categorized as: personal, economic, or social. [14] Aside this, there are some work-related predictors of suicidality in police officers, namely: frequent exposure to danger, heavy workload, and infrequent leave from work. [4] The relative easy access to firearms, along with the predominance of males in most police force settings (with men generally having higher suicide propensity than women), are also contributory factors to elevated suicide risk rates among police officers. [15]

Lagos State, is the most populous state in Nigeria, with a population size of 25 million. [16] As seen in most heavily populated cities of the world, there is a great potential for criminal activities, and other forms of security threats within Lagos. Given this circumstance, Lagos-based police officers may be more prone to work-related stress in comparison with their colleagues in other states of the federation. Beyond this, other peculiar stressors such as: traffic congestion and high cost of living, are commonly experienced by the inhabitants of Lagos, as well as police officers within the state. All of which may increase suicide risk in these officers, among other debilitating mental health problems.

Studies on suicidality and its predictors in police officers have emanated mostly from high-income nations, with minimal data from low-income settings as Nigeria. More so, there is a dearth of studies concerning suicidality and its predictors among police officers in South-West Nigeria, including, Lagos. In light of this, it is necessary to examine the burden and predictors of suicidality in

police personnel in Nigeria, as this may allow for easy identification of vulnerable officers, and provide an opportunity for early psycho-social intervention. Knowing this, our study attempted to determine the prevalence and predictors of suicidality among Nigerian police officers.

2. Materials and Methods

2.1. Ethical Statement

All procedures implemented in this work complied with the ethical standards on research and human experimentation of the Helsinki Declaration of 1975, as amended in 2013. Ethical approval for the study was obtained from the research and ethics committee of the Lagos State University Teaching Hospital, Nigeria (LREC/06/10/2135). Permission to carry out the study was also obtained from the authorities of Police College, Lagos.

2.2. Study Design and Participants

This study was conducted between May and June 2023, and the participants were police officers serving at the Police College, Lagos, Nigeria. This was a cross-sectional descriptive study, and inclusion criteria were: those in the junior official cadre, and who gave informed consent for participation. Those with a history of mental illness, and who did not give consent, were excluded. Non- probability convenience sampling was used to select a total of 600 participants.

2.3. Study Instruments

Socio-demographic Questionnaire

This instrument asked questions concerning the socio-demographic (age, gender, marital status, religion, educational status, job satisfaction) and clinical (history of substance use, family history of mental illness, family history of suicide) profile of the participants.

Suicide Behaviour Questionnaire-Revised (*SBQ-R*)

The Suicide Behavior Questionnaire-Revised (SBQ-R) is a brief self-report questionnaire used to assess for suicide risk. This instrument was designed by Osman *et al.* [17] based on the original 34-item SBQ developed by Linehan and Nielsen *et al.* [18] The four-item instrument is brief, and takes approximately five minutes to complete. Each of the four questions addresses a specific risk factor: the first item concerns presence of suicidal thoughts and attempts, the second, concerns frequency of suicidal thoughts, the third concerns the threat level of suicidal attempts, and the fourth concerns likelihood of future suicidal attempts. A maximum score of 18 is possible, and total score of ≥7 indicates significant risk of suicidal behavior. This instrument has an internal consistency of 0.93, [17] and has been validated for use in Nigeria. [19]

State-Trait Anxiety Inventory (*STAI*)

The STAI was developed to determine an individual's anxiety levels as a state and a trait. [20] The state subscale (STAI-S) assesses how the individual feels

"right now" or at the moment, while, the trait subscale (STAI-T) assesses how the individual generally feels. Each question is rated on a 4-point likert scale (not at all, somewhat, moderately so, very much so). The range of possible total scores is from 20 to 80 on both the STAI-T and STAI-S subscales. Higher scores indicate greater anxiety, as STAI scores are commonly classified as "no or low anxiety" (20 - 37), "moderate anxiety" (38 - 44), and "high anxiety" (45 - 80). Internal consistency coefficients for the scale have ranged from 0.86 to 0.95. [20]

Data Collection

The study purpose was explained and informed consent was obtained from eligible participants. The instruments were administered, and those identified with psychopathology were referred to the Police Mental Health and Counselling Unit of the Nigeria Police Medical Services, Lagos for intervention.

Statistical Analysis

Statistical analysis was done using the Statistical Package for the Social Sciences Version-26 (SPSS version-26). Descriptive statistics of the participants, such as: means, standard deviations, frequencies and percentages were presented. Chi-square Test of Independence was done to determine associations between socio-demographic variables, clinical variables, and suicidality. Variables that were found to be significant on this test (p-value < 0.05) were later included in a logistic regression model (Backward Stepwise Method). The regression analysis was to further examine their relationship with suicidality, and to determine the specific predictors of suicidality. Level of significance was set at $p < 0.05$ for all the statistical tests.

3. Results

A total of 638 participants met the inclusion criteria, however, only 600 participants completed the instruments, giving a 94% response rate from the sample.

Socio-Demographic Profile

Most of the participants were male (67%), less than 25 years of age (62%), Christian (66%), and single (90%). About half of them had tertiary education as their highest level of education (49%) (See Table 1).

Clinical Profile

About one-third of the sample was engaged in substance use (23%), with alcohol use being the commonest (14%). Family history of mental illness and family history of suicide were reported by 3%, and 5% of the sample respectively (See Table 1). Using the STAI, the mean score and prevalence of state anxiety were 43 (±10) and 38% respectively, while for trait anxiety, a mean of 46 (±9) and prevalence of 22% were recorded (See Table 1 and Table 2).

Prevalence of Suicidality

Using the SBQ-R, the mean score (±Standard Deviation) was 5 (±3), with 14% of the sample screening positive for suicidality (See Table 2). The lifetime-prevalence of suicidal ideation was 22%, 2% of the participants reported lifetime-suicidal attempt with concomitant hope to die. The prevalence of suicidal ideation in the

Table 1. Participant characteristics.

VARIABLE	FREQUENCY [N (%)]
Gender	
Male	403 (67)
Female	197 (33)
Marital Status	
Single	542 (90)
Married	25 (4)
Divorced	30 (5)
Widow/Widower	3 (1)
Religion	
Islam	196 (33)
Christianity	404 (67)
Education	
Secondary	308 (51)
Tertiary	292 (49)
Age	
<25 years	371 (62)
≥25 years	229 (38)
Job Satisfaction	
Yes	56 (9)
No	574 (91)
Family history of suicide	
Yes	28 (5)
No	572 (95)
Family history of mental illness	
Yes	15 (3)
No	585 (97)
Use of psychoactive substance	
None	462 (77)
Alcohol	84 (14)
Cannabis	9 (1.5)
Cigarette	6 (1)
Tramadol	3 (0.5)
Cocaine	1 (0.2)
Codeine	7 (1.2)
Heroin	1 (0.2)
Combination of 2 substances	7 (1.2)
Combination of 3 substances	11 (1.8)
Combination of 4 or more substances	9 (1.5)

Table 2. Descriptive statistics of the sbq-r and stai.

VARIABLE	FREQUENCY [N (%)]	MEAN (±SD)
Suicidality		
Yes	83 (14)	5 (3)
No	517 (86)	
State Anxiety		
Yes	210 (35)	43 (10)
No	390 (65)	
Trait Anxiety		
Yes	132 (22)	46 (9)
No	468 (78)	

*SD = Standard Deviation.

past year was 21%, with 9.3% having suicidal ideations very often. About 14% of them in their lifetime had declared a suicidal intent to others, and 7% had done this more than once due to having a strong desire to commit suicide. Furthermore, a likelihood of future suicide attempt was found in 6.4% of the sample (See Table 3).

Predictors of Suicidality

To determine the variables independently associated with suicidality, a Chi-Square Test of Independence was done. The following socio-demographic variables had a significant association with suicidality: age, gender, marital status, and education. Clinical variables such as state anxiety, trait anxiety, substance use and family history of suicide were also significantly associated with suicidality. However, family history of mental illness and job satisfaction were not significant (See Table 4).

Using regression analysis, suicidality was made the dependent variable, and significant variables from the Chi-Square Test were made the independent variables. Being female was associated with a 5-fold increased risk of suicidality. Also, with every increase in state anxiety and trait anxiety score, the risk of suicidality was increased by 6-fold and 3-fold respectively ($p < 0.001$). Those who were unmarried were three times more likely to be suicidal in comparison to married officers, while those using substance were two times more likely to be suicidal compared to those who did not. However, family history of suicide, education, and age were no longer significant on regression (See Table 4).

4. Discussion

In summary, there was a 14% prevalence of suicidality among police officers, predictors of suicidality were: anxiety, substance use, being unmarried, and female gender.

Table 3. Suicidality profile of the participants using the SBQ-R.

VARIABLE	FREQUENCY (%)
A. Have you ever thought about or attempted to kill yourself?	
1. Never	467 (78)
2. It was just a brief passing thought	54 (9)
3a. I have had a plan at least once to kill myself but did not try to do it	50 (8.3)
3b. I have had a plan at least once to kill myself and really wanted to die	16 (2.7)
4a. I have attempted to kill myself, but did not want to die	15 (2.5)
4b. I have attempted to kill myself, and really hoped to die	14 (2.3)
B. How often have you thought about killing yourself in the past year?	
1. Never	475 (79.2)
2. Rarely (1 time)	14 (2.3)
3. Sometimes (2 times)	40 (6.7)
4. Often (3-4 times)	15 (2.5)
5. Very Often (5 or more times)	56 (9.3)
C. Have you ever told someone that you were going to commit suicide, or that you might do it?	
1.No	514 (85.7)
2a. Yes, at one time, but did not really want to die	11 (1.8)
2b. Yes, at one time, and really wanted to die	13 (2.2)
3a. Yes, more than once, but did not want to do it	20 (3.3)
3b. Yes, more than once, and really wanted to do it	42 (7)
D. How likely is it that you will attempt suicide someday?	
0. Never	458 (76.3)
1. Not possible at all	78 (13)
2. Rather unlikely	15 (2.5)
3. Unlikely	11 (1.8)
4. Likely	21 (3.5)
5. Rather likely	4 (0.7)
6. Very likely	13 (2.2)

Key Findings

A prevalence of 14 % was found for suicidality among the police officers. In comparison with other African countries, this prevalence was close to the 15% rate recorded in Tanzanian police officers, [5] but was higher than the 10.6% seen in South-Africa. [21] Furthermore, the suicidality rate in this study was also higher than 1.2%, [22] 6.4%, [23] and 10% [24] found in police officers serving in affluent countries like: Italy, Norway, and Canada. The contrast between the suicidality rate of this study and earlier studies may exist due to varying methodology. Beyond this, in comparison to the above listed high-income nations with lower police suicidality rates, Nigeria is resource-poor. This suggests that Nigerian

Table 4. Predictors of suicidality.

	CHI-SQUARE TEST			REGRESSION ANALYSIS		
VARIABLE	SUICIDALITY ABSENT TOTAL N = 517 N (%)	SUICIDALITY PRESENT TOTAL N = 83 N (%)	CHI-SQUARE VALUE DF = 1 (SIG)	VARIABLE	B	ODDS RATIO (95% CI LB - UB) SIG
Age						2.62
<25 years	318 (86)	53 (14)	0.78	**Age**	0.77	(1.49 - 4.78)
≥25 years	199 (87)	30 (13)	**(0.04)**			0.08
Gender						4.83
Male	346 (86)	57 (14)	0.33	**Female Gender**	0.59	(2.35 - 7.28)
Female	171 (87)	26 (13)	**(0.01)**			**0.02**
Marital Status						2.63
Married	22 (88)	3 (12)	0.17	**Unmarried Marital Status**	0.41	(1.27 - 5.18)
Unmarried	495 (86)	80 (14)	**(0.04)**			**0.03**
Education						1.92
Tertiary	262 (90)	30 (10)	5.48	**Education**	-0.64	(1.48 - 4.08)
Secondary	255 (83)	53 (17)	**(0.03)**			0.07
State Anxiety						5.69
Yes	197 (94)	13 (6)	15	**State Anxiety**	0.17	(3.33 - 6.12)
No	320 (82)	70 (18)	**(<0.001)**			**<0.001**
Trait Anxiety						2.53
Yes	129 (98)	388 (83)	17.8	**Trait Anxiety**	0.40	(2.31 - 4.14)
No	3 (2)	80 (17)	**(<0.001)**			**<0.001**
Substance Use						1.89
Yes	117 (85)	21 (15)	0.16	**Substance Use**	0.12	(1.78 - 2.65)
No	400 (87)	62 (13)	**(0.03)**			**0.03**
Family History of Suicide						1.51
Yes	25 (89)	3 (10)	0.24	**Family History of Suicide**	0.65	(1.35 - 3.88)
No	492 (86)	80 (14)	**(0.03)** *			0.07
Family Mental Illness						
Yes	14 (93)	1 (7)	0.19			
No	503 (86)	82 (14)	(0.66) *			
Job Satisfaction						
Yes	47 (84)	9 (16)	0.09			
No	470 (86)	74 (14)	(0.76)			

*Fisher's Exact Value, *DF = degree of Freedom, B = Standardised Co-efficient Value; †N = Frequency, ‡SIG = Level of Significance; §LB = Lower Border of Confidence Interval, || UB = Upper Border of Confidence Interval.

police officers may have to contend with more criminal activities, lesser wages, socio-economic hardships, apart from the rigors of police work. Over time, constantly dealing with such stressors may increase suicide risk.

Being unmarried was associated with a higher suicidal risk in police officers, this had been established previously. [23] [25] [26] [27] Notably, suicide studies on the general population show that unmarried individuals have a proneness to suicidality. [28] [29] [30] [31] It is probable that unmarried persons may not enjoy as much physical and emotional support as those who are married. Considering that majority of police officers face a lot of stress while on duty, the absence of a confidante or partner to share ideas, problems, and emotions with, could be detrimental to mental health.

Suicide risk was greater in female officers, this echoes past study outcomes. [2] [23] [26] Diverse explanations have been made for the gender difference in suicidality among police officers. For instance, unlike males, females may be physically and emotionally less suited to police work, therefore, may be easily overwhelmed. In addition, it is the opinion of the authors that there is a likelihood of female officers encountering adversities in the work place such as sexual harassment, gender discrimination, and an unrelenting need to prove themselves worthy of their jobs, this could be emotional draining. Coupled with their official duties, most females have to deal with the extra responsibility of caring for their families, this could predispose them psychological distress. Also, suicidality is commonly reported in depression, a disorder with a female predilection, therefore female officers with depression may have suicidality as one of their symptoms.

Anxiety was a predictor of suicidality, this corroborates findings made by Berg *et al.*, [23] Di Nota *et al.*, [2] and Guerrero-Barona *et al.* [14] This is an expected finding because, most persons reporting a lifetime history of suicide ideation or attempt usually have a prior diagnosis of anxiety disorder. [32] [33] For police officers, the constant threat of danger and death which accompanies their profession may put them in a state of recurrent tension, leading to anxiety, and in time, suicidality.

Substance use was linked with high suicide risk among the police officers, identical observations were made hitherto. [2] [8] [34] [35] The linear relationship between psychoactive substance use and suicide risk is well-known. [36] [37] [38] Because of the pervasive effect of psychoactive substances on the cognition, mood, and behavior of users, suicidality may understandably be a fall-out of substance use in police officers, thereby limiting their effectiveness at work.

Strengths and Limitations

Given that suicide is viewed as a taboo topic in most African countries, and the rarity of mental health research focused on law enforcement officers within Africa, this study is unique and provides some valuable insight. However, the exclusion of senior police officers is a limitation, possibly, the study findings may have differed considerably if this group of officers were included. The use of

self-reporting instruments may have also increased the possibility of selection of socially-desirable responses by the participants. The use of a screening instrument instead of a diagnostic one may have overestimated the prevalence of suicidality.

Clinical Implications

Police officers, especially those at risk for suicide, may require regular suicide risk assessment, this would allow for early identification of vulnerable persons, and the commencement of mental health intervention for those in need of this.

Policy Implications

Our study outcome may provide the Nigerian government and other stakeholders in the Nigerian police force with data which could serve as an advocacy tool for mental health promotion, and suicide prevention activities for Nigerian police officers. Also, the study shows that institution of mental health support units in police commands across the nation, is a necessity. Hopefully, this could translate to a more mentally-healthy Nigerian Police Force, and of course, enhanced maintenance of security, law, and order by police officers in Nigeria.

Future Research Directions

A comparative study on the differences between the burden and predictors of suicidality in junior and senior police officers may be of great interest and value. A toxicology screening test may be incorporated into future studies to determine the relationship between substance use and suicidality in police officers. Longitudinal studies on suicidality and its predictors in police officers may also be considered. Also, the impact of psychotherapy on suicide risk in police officers is worth exploring.

5. Conclusion

Police officers play a major role in ensuring a security of lives and properties in every society, suicide prevention, and mental health promotion strategies should be put in place by the leadership of the police force for their officers.

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Data Availability Statement

Data supporting the study results can be provided on request.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

[1] United States Center for Disease Control and Prevention (2022) Suicide Prevention: Risk and Protective Factors. National Center for Injury Prevention and Control, United States of America.

[2] Di Nota, P.M., Anderson, G.S., Ricciardelli, R., Carleton, R.N. and Groll, D. (2020) Mental Disorders, Suicidal Ideation, Plans and Attempts among Canadian Police. *Occupational Medicine*, **70**, 183-190. https://doi.org/10.1093/occmed/kqaa026

[3] Chae, M.H. and Boyle, D.J. (2013) Police Suicide: Prevalence, Risk, and Protective Factors. *Policing*, **36**, 91-118. https://doi.org/10.1108/13639511311302498

[4] Stanley, I.H., Hom, M.A. and Joiner, T.E. (2016) A Systematic Review of Suicidal Thoughts and Behaviors among Police Officers, Firefighters, EMTs, and Paramedics. *Clinical Psychology Review*, **44**, 25-44. https://doi.org/10.1016/j.cpr.2015.12.002

[5] Njiro, B.J., Ndumwa, H.P., Msenga, C.J., Kawala, T., Matola, E., Mhonda, J., *et al.* (2021) Depression, Suicidality, and Associated Risk Factors among Police Officers in Urban Tanzania: A Cross-Sectional Study. *General Psychiatry*, **34**, e100448. https://doi.org/10.1136/gpsych-2020-100448

[6] Loo, R. (2001) Effective Postvention for Police Suicide. *Australasian Journal of Disaster and Trauma Studies*, **5**, 132-139.

[7] Krishnan, N., Steene, L.M.B., Lewis, M., Marshall, D. and Ireland, J.L. (2022) A Systematic Review of Risk Factors Implicated in the Suicide of Police Officers. *Journal of Police and Criminal Psychology*, **37**, 939-951. https://doi.org/10.1007/s11896-022-09539-1

[8] Meyer, R., Rothmann, S. and Pienaar, J. (2005) Coping, Stress and Suicide Ideation in the South African Police Service in the Eastern Cape. *South African Journal of Economic and Management Sciences*, **6**, a1527. https://doi.org/10.4102/sajems.v6i4.1527

[9] Clark, D.W., White, E.K. and Violanti, J.M. (2010) Law Enforcement Suicide: Current Knowledge and Future Directions. *Police Chief*, **79**, 48-51.

[10] Andersen, J. and Papazoglou, K. (2016) Police Health Professionals' Knowledge and Practices in Educating Officers about Trauma and Health. *Journal of Law Enforcement*, **5**, 1-21.

[11] Syed, S., Ashwick, R., Schlosser, M., Jones, R. and Rowe, S. and Billings, J. (2020) Global Prevalence and Risk Factors for Mental Health Problems in Police Personnel: A Systematic Review and Meta-Analysis. *Occupational and Environmental Medicine*, **77**, 737-747. https://doi.org/10.1136/oemed-2020-106498

[12] Krayer, A., Kulhari, S., Sharma, V. and Robinson, C. (2023) Pathways to Suicide among Police in Rajasthan: Perceptions and Experiences of Police Personnel. *International Journal of Environmental Research and Public Health*, **20**, Article 1812. https://doi.org/10.3390/ijerph20031812

[13] Fox, J., Desai, M.M., Britten, K., Lucas, G., Luneau, R. and Rosenthal, M.S. (2012) Mental-Health Conditions, Barriers to Care, and Productivity Loss among Officers in an Urban Police Department. *Connecticut Medicine*, **76**, 525-531.

[14] Guerrero-Barona, E., Guerrero-Molina, M., Chambel, M.J., Moreno-Manso, J.M., Bueso-Izquierdo, N. and Barbosa-Torres, C. (2021) Suicidal Ideation and Mental Health: The Moderating Effect of Coping Strategies in the Police Force. *International Journal of Environmental Research and Public Health*, **18**, Article 8149. https://doi.org/10.3390/ijerph18158149

[15] Hunt, T., Wilson, C.J., Caputi, P., Woodward, A. and Wilson, I. (2017) Signs of

Current Suicidality in Men: A Systematic Review. *PLOS ONE*, **12**, e0174675. https://doi.org/10.1371/journal.pone.0174675

[16] Lagos State Government (2022) Statistical Bulletin and Policy Brief on Reproductive Health, Family Planning, Gender and Population Issues. Lagos Bureau of Statistics, Lagos.

[17] Osman, A., Bagge, C.L., Gutierrez, P.M., Konick, L.C., Kopper, B.A. and Barrios, F.X. (2001) The Suicidal Behaviors Questionnaire-Revised (SBQ-R): Validation with Clinical and Nonclinical Samples. *Assessment*, **8**, 443-454. https://doi.org/10.1177/107319110100800409

[18] Linehan, M.M. and Nielsen, S.L. (1981) Assessment of Suicide Ideation and Parasuicide: Hopelessness and Social Desirability. *Journal of Consulting and Clinical Psychology*, **49**, 773-775. https://doi.org/10.1037/0022-006X.49.5.773

[19] Aloba, O., Ojeleye, O. and Aloba, T. (2017) The Psychometric Characteristics of the 4-Item Suicidal Behaviors Questionnaire-Revised (SBQ-R) as a Screening Tool in a Non-Clinical Sample of Nigerian University Students. *Asian Journal of Psychiatry*, **26**, 46-51. https://doi.org/10.1016/j.ajp.2017.01.017

[20] Spielberger, C.D., Gorsuch, R.L., Lushene, R., Vagg, P.R. and Jacobs, G.A. (1983) Manual for the State-Trait Anxiety Inventory. Consulting Psychologists Press, Palo Alto.

[21] Swanepoel, C. and Pienaar, J. (2002) Coping, Stress and Suicide Ideation in the South African Police Service in Gauteng Province. *Acta Criminologica*: *South African Journal of Criminology*, **17**, 17-33.

[22] Grassi, C., Del Casale, A., Cucè, P., Kotzalidis, G.D., Pelliccione, A., Marconi, W., *et al*. (2019) Suicide among Italian Police Officers from 1995 to 2017. *Rivista di Psichiatria*, **54**, 18-23.

[23] Berg, A.M., Hem, E., Lau, B., Loeb, M. and Ekeberg, Ø. (2003) Suicidal Ideation and Attempts in Norwegian Police. *Suicide and Life Threatening Behavior*, **33**, 302-312. https://doi.org/10.1521/suli.33.3.302.23215

[24] Carleton, R.N., Afifi, T.O., Turner, S., Taillieu, T., LeBouthillier, D.M., Duranceau, S., *et al*. (2018) Suicidal Ideation, Plans, and Attempts among Public Safety Personnel in Canada. *Canadian Psychology*, **59**, 220-231. https://doi.org/10.1037/cap0000136

[25] Burke, R.J. and Mikkelsen, A. (2007) Suicidal Ideation among Police Officers in Norway. *Policing*, **30**, 228-236. https://doi.org/10.1108/13639510710753234

[26] Violanti, J.M., Fekedulegn, D., Charles, L.E., Andrew, M.E., Hartley, T.A. and Mnatsakanova, A. (2009) Suicide in Police Work: Exploring Potential Contributing Influences. *American Journal of Criminal Justice*, **34**, 41-53. https://doi.org/10.1007/s12103-008-9049-8

[27] Quarshie, E.N.B., Odame, S.K. and Annor, F. (2021) Suicidal Behaviors in the Ghana Police Service. *Crisis*: *Journal of Crisis Intervention and Suicide Prevention*, **42**, 194-201. https://doi.org/10.1027/0227-5910/a000707

[28] Qin, P., Agerbo, E. and Mortensen, P.B. (2003) Suicide Risk in Relation to Socioeconomic, Demographic, Psychiatric, and Familial factors: A National Register-Based Study of all Suicides in Denmark, 1981-1997. *American Journal of Psychiatry*, **160**, 765-772. https://doi.org/10.1176/appi.ajp.160.4.765

[29] Denney, J.T., Rogers, R.G., Krueger, P.M. and Wadsworth, T. (2009) Adult Suicide Mortality in the United States: Marital Status, Family Size, Socioeconomic Status, and Differences by Sex. *Social Science Quarterly*, **90**, 1167-1185. https://doi.org/10.1111/j.1540-6237.2009.00652.x

[30] Wyder, M., Ward, P. and De Leo, D. (2009) Separation as a Suicide Risk Factor. *Journal of Affective Disorders*, **116**, 208-213. https://doi.org/10.1016/j.jad.2008.11.007

[31] Øien-Ødegaard, C., Hauge, L.J. and Reneflot, A. (2021) Marital Status, Educational Attainment, and Suicide Risk: A Norwegian Register-Based Population Study. *Population Health Metrics*, **19**, Article No. 33. https://doi.org/10.1186/s12963-021-00263-2

[32] Sareen, J., Cox, B.J., Afifi, T.O., de Graaf, R., Asmundson, G.J., ten Have, M. and Stein, M.B. (2005) Anxiety Disorders and Risk for Suicidal Ideation and Suicide Attempts: A Population-Based Longitudinal Study of Adults. *Archives of General Psychiatry*, **62**, 1249-1257. https://doi.org/10.1001/archpsyc.62.11.1249

[33] Nepon, J., Belik, S.L., Bolton, J. and Sareen, J. (2010) The Relationship between Anxiety Disorders and Suicide Attempts: Findings from the National Epidemiologic Survey on Alcohol and Related Conditions. *Depression and Anxiety*, **27**, 791-798. https://doi.org/10.1002/da.20674

[34] Violanti, J.M. (2004) Predictors of Police Suicide Ideation. *Suicide and Life Threatening Behavior*, **34**, 277-283. https://doi.org/10.1521/suli.34.3.277.42775

[35] Rouse, L.M., Frey, R.A., Lopez, M., Wohlers, H., Xiong, I., Llewellyn, K., *et al.* (2015) Law Enforcement Suicide: Discerning Etiology through Psychological Autopsy. *Police Quarterly*, **18**, 79-108. https://doi.org/10.1177/1098611114563083

[36] Wilcox, H.C., Conner, K.R. and Caine, E.D. (2004) Association of Alcohol and Drug Use Disorders and Completed Suicide: An Empirical Review of Cohort Studies. *Drug and Alcohol Dependence*, **76**, S11-S19. https://doi.org/10.1016/j.drugalcdep.2004.08.003

[37] Bohnert, K.M., Ilgen, M.A., Louzon, S., McCarthy, J.F. and Katz, I.R. (2017) Substance Use Disorders and the Risk of Suicide Mortality among Men and Women in the US Veterans Health Administration. *Addiction*, **112**, 1193-1201. https://doi.org/10.1111/add.13774

[38] Lynch, F.L., Peterson, E.L., Lu, C.Y., Hu, Y., Rossom, R.C., Waitzfelder, B.E., *et al.* (2020) Substance Use Disorders and Risk of Suicide in a General US Population: A Case Control Study. *Addiction Science and Clinical Practice*, **15**, Article No. 14. https://doi.org/10.1186/s13722-020-0181-1