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ABSTRACT: Policing is a taxing profession. Organizational and operational issues create unavoidable stressors. These challenges include shift work, staffing shortages, and responding to traumatic incidents. Also, contemporary issues such as the COVID-19 pandemic and anti-police rhetoric compound a police officer's daily stressors. Repeated exposure to stress can adversely impact an officer's mental and physical health. Studies show conditions such as PTSD and depression are common among law enforcement officers. In addition, suicide is a leading cause of death among police officers.

Furthermore, police officers have a shorter life expectancy compared to the general public. Despite the dangers associated with unmanaged stress, police culture prevents most officers from seeking mental health assistance. This quantitative study examined whether a police officer's education level, physical fitness level, or both are associated with officer-to-officer psychological stigmatization. Based on Stuart's (2017) research, this study administered a stigmatization survey to active and retired police officers. The association and strength of the variables, specifically education, physical fitness levels, and officer-to-officer psychological stigmatization, were assessed using Spearman's correlation. The study found no significant relationship between education level and officer-to-officer psychological stigmatization or physical fitness and officer-to-officer psychological stigmatization.

**Keywords**: police officer wellness, peer support, police officer suicide, police officer mental health, police officer trauma

### INTRODUCTION

Policing is a taxing occupation that exposes officers to numerous stressors, such as organizational challenges that include rotating shifts, a rigid hierarchy, and staffing shortages (Arble, Daughterty, & Arnatz, 2017; Arble et al., 2018; Bell et al., 2021; Carleton et al., 2020; Copenhaver & Tewksbury, 2018; Craddock & Telesco, 2021; Stancel et al., 2019; Stogner et al., 2020; Violanti et al., 2017). In addition to institutional challenges, police officers face

operational hazards such as combative suspects, horrific traffic accidents, and responding to domestic violence (Craddock & Telesco, 2021; Syed et al., 2020).

Additionally, the COVID-19 pandemic (Jennings & Perez, 2020) and nationwide protests (Mourtgos et al., 2021) further exacerbated the everyday stressors associated Navigating with policing. the above conditions increases police officers' exposure to trauma, thus challenging an officer's physical and psychological wellbeing (Craddock & Telesco, 2021; Martin et

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al., 2021; Soravia et al., 2021; Syed et al., 2020).

The literature highlighting mental illness among police officers is extensive. For example, Jetelina et al. (2020) surveyed more than 400 police officers, revealing that 26% of the officers screened positive for current mental illness symptoms. In addition, 12% of the officers had a mental health diagnosis within their lifetime. Although this study only examined officers from one agency, other studies confirm the existence of mental illness among police officers.

Soomro and Yanos (2018) surveyed active police officers and found that 12% were likely to screen positive for posttraumatic stress disorder (PTSD). The presence of mental health disorders among police officers is apparent (Jetelina et al., 2020; Soomro & Yanos, 2018), and these challenges are not limited to policing in the United States. Syed et al. (2020) conducted a meta-analysis involving police personnel from 24 countries. The study's findings revealed that more than 10% of the officers screened positive for PTSD or depression. Even though police officers clearly face psychological challenges, most police officers do not seek mental health assistance (Drew & Martin, 2021: Jetelina et al., Stuart, 2017). Sadly, research shows that police officers are more likely to die from suicide than from felonious assaults. Between 2017 and 2019, suicides were the leading cause of police officer deaths in the U.S. (Spence & Drake, 2021). Violanti and Steege (2021) examined more than 4,000,000 death certificates from 26 states. Compared to other occupations, law enforcement officers are 54% more likely to die by suicide.

Drew and Martin (2021) postulated that most police officers believe stigmatization is a barrier preventing police officers from seeking help. Historically, policing is a maledominated profession. Hyland and Davis (2019) noted that less than 15% of the sworn

police officers in the U.S. are female. Because of such male dominance, *machismo* is integral to police culture (Farrell et al., 2020). One aspect of *machismo* is displaying a rugged persona and suppressing emotions (Stuart, 2017). Traditional police culture also suggests that asking for help is a perceived weakness (Farrell et al., 2020; Stuart, 2017). In addition to the supposed weakness, police officers fear that having a mental health illness or being under mental health medical care can adversely impact their career prospects (Stuart, 2017).

Despite the apparent mental health challenges associated with police work, police officers who experience psychological conditions like PTSD are most likely to endorse mental health stigmatization (Soomro & Yanos, 2018). This study administered a nationwide survey to active and retired police officers, assessing the association between education levels, physical fitness levels, and officer-to-officer stigmatization.

#### **METHODOLOGY**

This study's target population was active and retired police officers throughout the United States, based on Stuart's (2017) officer-to-officer study. A power analysis using G\*Power 3.1.9.7 was conducted to determine the minimum sample size needed (Faul et al., 2007). Based on the power analysis, a minimum of 84 participants was needed to achieve a medium effect. Volunteer survey participants were recruited using Qualtrics research panels. Qualtrics is a global commercial software company that recruits participants from existing pools (Miller et al., 2020). Online panels consist of participants prospective who have voluntarily registered to complete survey responses (Boas et al., 2018). Crowdsourcing platforms enable researchers to recruit large samples relatively quickly (Belliveau et al., 2022).

This study used a quantitative, crosssectional, non-experimental design. A quantitative approach was selected because it is cost-effective, efficient, user-friendly, and likely to yield higher response rates and enhance data management (Regmi et al., 2017). Surveys allow researchers to conduct a scientific inquiry using a larger number of observations. Online surveys are compatible with web-based technologies, thus increasing the potential pool of participants. A crosssectional design is appropriate for testing hypotheses while allowing researchers to examine relationships between dependent and independent variables (Stockemer, 2019).

This study examined the relationship between levels of education and physical well as officer-to-officer fitness. as stigmatization. Education level is the highest degree or grade level achieved (United Nations Educational, Scientific and Cultural Organization, n.d.). Physical fitness refers to any exercise involving muscular strength or cardiovascular endurance. strength endurance (Hopkins & Walker, 1988). Lastly, stigmatization among police officers was measured using the 11 questions outlined by Stuart's (2017) Police Officer Stigma Scale.

#### **RESULTS**

While 103 participants consented to participate in this study, the analysis used a dataset with only complete participant responses. Kang (2013) postulates that the most common approach to missing data is to exclude it and analyze the remaining information. Because incomplete data sets were not included in the analysis, the final sample was (n = 99).

Most respondents were male (n = 82), with 17 female (n = 17) officers ranging in age from 18 to over 50 and identifying themselves as White or Caucasian (n = 60). In addition, most respondents reported being married (n = 58). Participants' education levels ranged from a high school diploma/GED to a terminal Juris Doctorate/Doctoral Degree. However, the most prevalent was a Bachelor's degree (n =28). Nearly all participants (n = 91) reported completing crisis intervention training (CIT). Most police officers reportedly engaged in at least five hours of physical fitness per week; the most common response was 5–8 hours a week (n = 57). The officers' years of service ranged between less than one year and more than 25 years of experience, with the largest percentage ranging between 6 and 15 years of service: 6-10 years (n = 28) and 11-15 years (n = 24). The number of sworn officers assigned to the respondents' respective police departments ranged from one officer to more than 1,000. However, most officers worked for departments having less than 250 officers: 1–49 officers (n = 24), 50–99 officers (n = 24) 22), and 100–249 officers (n = 23). The respondents' ranks ranged from frontline officers to executive-level Captain or above. In addition, the sample included retired officers as well as officers who separated from service before retirement. The largest cohort of respondents identified themselves as a police officer, deputy, trooper, detective, or corporal (n = 47). Lastly, most officers reported sleeping at least five hours a night (n = 70). Table 1 presents the frequencies and percentages of the socio-demographic variables.

 Table 1: Frequency Table for Nominal Variables

Variables	n	%
Gender		
Male	82	82.8
Female	17	17.2
Age		
18–29	13	13.1
30–39	47	47.5
40–49	10	10.1
50 and over	29	29.3
Race		
Black or African American	22	22.2
Hispanic or Latino	9	9.1
White or Caucasian	60	60.6
Other race, ethnicity, or origin	7	7.1
Preferred not to say	1	1.0
Marital status		
Never married	5	5.1
Single	26	26.3
Married	58	58.6
Divorced	7	7.1
Widowed	3	3.0
Education		
High School / GED	16	16.2
Some College (No Degree)	6	6.1
Technical School/Trade School	3	3.0
Associate degree	17	17.2
Bachelor's Degree	28	28.3
Master's Degree	20	20.2
Juris Doctorate or Doctoral Degree	7	7.1
Prefer not to answer	2	2.0

Variables	n	%
Completed crisis intervention training		
Yes	91	91.9
No	8	8.1
Physical fitness hours per week		
0–4 hours	19	19.2
5–8 hours	57	57.6
9 or more hours	23	23.2
Years of civilian police experience		
0–5 years	12	12.1
6–10 years	28	28.3
11–15 years	24	24.2
16–19 years	13	13.1
20–24 years	9	9.1
25 or more years	13	13.1
Number of sworn officers in the department		
1–49 officers	24	24.2
50–99 officers	22	22.2
100–249 officers	23	23.2
250–499 officers	16	16.2
500–999 officers	8	8.1
1000 or more officers	6	6.1
Current rank status		
Police Officer, Deputy, Trooper, Detective, or Corporal	47	47.5
Sergeant, Master Sergeant, or Lieutenant	18	18.2
Captain or above	8	8.1
Retired	20	20.2
Not retired but separated from service	6	6.1
Hours of sleep per night		
0–4 hours	22	22.2
5–8 hours	70	70.7
9 or more hours	7	7.1

Participants completed the 11-item Police Officer Stigma Scale. The mean scores for each of the 11 items rounded to almost 4.00, thus suggesting that the participants were generally agreeable regarding officer-to-officer psychological stigmatization. Table 2 presents the summary statistics.

**Table 2:** Summary Statistics for Responses on the Stuart (2017) 11-Item Police Officer Stigma Scale

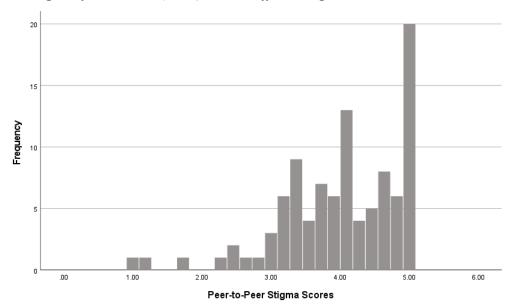
Variable	n	Min	Max	M	SD
Q1: Most police officers would not disclose to a supervisor/manager if they were experiencing a mental illness.	99	1.00	5.00	4.05	1.15
Q2: Most police officers would not disclose to a colleague if they were experiencing a mental illness.	99	1.00	5.00	4.05	1.07
Q3: Most police officers would expect to be discriminated against at work if they disclosed that they were experiencing a mental illness.	99	1.00	5.00	4.02	1.15
Q4: Most would not want a supervisor/manager who had a mental illness.	99	1.00	5.00	4.02	1.17
Q5: Most police officers think that being treated for a mental illness is a sign of personal failure.	99	1.00	5.00	3.87	1.20
Q6: Most police supervisors/managers would not consider an application for promotion from an officer who has had a mental illness.	99	1.00	5.00	3.97	1.10
Q7: Most police officers would not seek professional help if they were experiencing a mental illness.	99	1.00	5.00	4.07	1.15
Q8: Most officers would not willingly accept a colleague with a mental illness as a partner.	99	1.00	5.00	3.98	1.14
Q9: Most police officers would think less of a colleague who has had a mental illness.	99	1.00	5.00	3.84	1.29
Q10: Once they know a colleague has had a mental illness, most police officers would take their opinions less seriously.	99	1.00	5.00	3.95	1.19
Q11: Most police officers believe that a colleague who has had a mental illness is not trustworthy.	99	1.00	5.00	3.90	1.19

A survey's reliability indicates the instrument's potential to measure consistency (Tavakol & Dennick, 2011). The results of an instrument's internal reliability range are between 0 and 1; an acceptable alpha range is between .70 and .95. Based on Stuart (2017), this study examined the internal consistency of the Police Officer Stigma Scale using Cronbach's alpha internal

consistency reliability test; the result for the 11 survey items was  $\alpha = .92$  indicating excellent internal consistency for police-to-police stigma.

The Police-to-police stigma scores ranged from 1.00 to 5.00, with M = 3.97 and SD = 0.87. Figure 1 presents a histogram of the police officer stigma scores (Stuart, 2017).

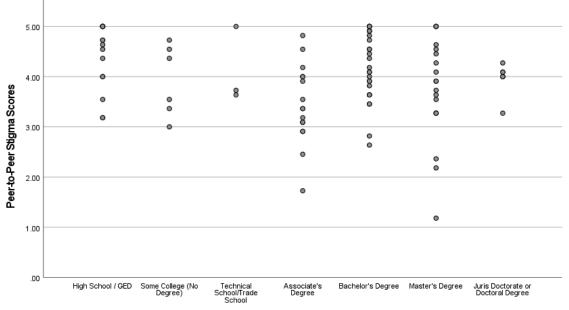
Figure 1: Histogram for Stuart's (2017) Police Officer Stigma Scores



Spearman correlation examined the association between a police officer's education level and officer-to-officer psychological stigmatization. There was no significant relationship between education

level and police-to-police stigma ( $r_s = -.08$ , p = .447). Figure 2 presents a scatterplot between education and Stuart's (2017) Police Officer Stigma Scores.

Figure 2: Scatterplot between Educational Level and Officer-to-Officer Stigma



Educational Level

A second Spearman correlation examined the association between physical fitness hours per week and officer-to-officer psychological stigmatization. There was no significant relationship between hours per week of physical fitness and officer-to-officer stigma ( $r_s = .04$ , p = .673). Figure 3 presents a scatterplot between weekly physical fitness hours and officer-to-officer stigma scores.

### DISCUSSION

This study explored the relationship between police officers' education levels, physical fitness levels, and officer-to-officer psychological stigmatization. The trends in the socio-demographic variables were examined using frequencies and percentages, and the means and standard deviations of the responses to Stuart's (2017) Police Officer Stigma Scale.

There was no significant relationship between an officer's education level and officer-to-officer stigma ( $r_s = -.08$ , p = .447). Furthermore, there was no significant relationship between physical fitness hours per week and office-to-officer stigma ( $r_s = .04$ , p = .673). Consequently, neither of the null hypotheses was rejected.

The mean score for each of the 11 items on the officer-to-officer stigma scale, rounded to 4.00, suggests that the respondents overwhelmingly agree that officer-to-officer stigmatization is prevalent within U.S. policing. In addition to the presence of officer-to-officer stigmatization, multiple studies indicate that stigmatization prevents police officers from seeking help (Drew & Martin, 2021; Stuart, 2017).

Knowing that suicide is one of the leading causes of police officer deaths (Spence & Drake, 2021) and that police officers are not inclined to ask for help (Jetelina et al., 2020; Martin et al., 2021; Newell et al., 2021), it seems logical to incorporate resiliency training into policing pedagogy. Resilience training is designed to equip officers with

tools to help them self-regulate their body's response to stressors (McCraty & Atkinson, 2012). Youssef et al. (2013) found that combat veterans with higher resilience levels predicted lower suicidality levels. Like military veterans, police officers have high rates of suicide (Violanti & Steege, 2021), and many aspects of police culture overlap with military culture (Fry & Berkes, 1983). Therefore, enhanced resiliency can mitigate stress-related psychological and physical health risks (McCanlies et al., 2017; Papazoglou & Andersen, 2014). Given the potential benefits of enhanced resiliency, law enforcement agencies should explore the feasibility of adding recurring resiliency training into recruit-level and in-service training.

Although it was not the focus of this study, the literature revealed that police agencies are increasingly introducing mindfulness-based interventions (MBI) as a part of their officer wellness programs (Bergman et al., 2016; Grupe et al., 2021; Rehder et al., 2021; Ribeiro et al., 2019). The MBI for police officers is generally an eight-week curriculum that aims to reduce police officers' stress, increase self-awareness, and improve coping skills. While MBI studies with law enforcement officers have mixed results, several studies show introducing MBI to police officers has a positive impact (Grupe et al., 2021; Rehder et al., 2021).

protocol becoming an in-Another creasingly popular tool to combat stigmatization among police officers is mandatory routine mental health assessments. For example, in 2021, the state of Connecticut passed legislation requiring all sworn police officers to undergo a mental health assessment at least once every five years (Connecticut General Assembly, n.d.). In addition, recent studies have found that police officers endorse mandatory mental health assessments. For example, Padilla (2023) found that in one Southwestern police

department, more than 50% of the officers were willing to participate in yearly checkups. Crowe et al. (2022) conducted a nationwide query and found that police officers endorsed annual mental health checkups. These findings suggest that some U.S. police officers have a positive attitude toward mental wellness. Additionally, Porter and Lee (2023) found that this cultural shift is not limited to officers in the U.S.

#### **FUTURE RECOMMENDATIONS**

One of the smallest cohorts in this study is comprised of police officers with 5 years of service or less (n = 12). Based on the findings, the study could not determine whether a police officer's stigmatization levels change over time. Therefore, future research should consider querying police recruits at the beginning of their academy training, conducting follow-up assessments at the end of field training, and after a year of solo fieldwork. A longitudinal study will help to assess whether officer-to-officer stigmatization changes over time.

#### REFERENCES

- Arble, E., Daugherty, A. M., & Arnetz, B. B. (2018). Models of first responder coping: Police officers as a unique population. *Stress and Health*, 34(5), 612–621. <a href="https://doi.org/10.1002/smi.2821">https://doi.org/10.1002/smi.2821</a>
- Arble, E., Lumley, M. A., Pole, N., Blessman, J., & Arnetz, B. B. (2017). Refinement and preliminary testing of an imagery-based program to improve coping and performance and prevent trauma among urban police officers. *Journal of Police and Criminal Psychology*, 32(1), 1–17. https://doi.org/10.1007/s11896-016-
- Bell, S., Palmer-Conn, S., & Kealey, N. (2021), 'Swinging the lead and working
- Bell, S., Palmer-Conn, S., & Kealey, N. (2021). 'Swinging the lead and working the head' An explanation as to why mental illness stigma is prevalent in policing. *The Police Journal: Theory*,

- *Practice and Principles*, 95(1), 4–23. https://doi.org/10.1177/0032258x211049
- Belliveau, J., Soucy, K. I., & Yakovenko, I. (2022). The validity of Qualtrics panel data for research on video gaming and gaming disorder. *Experimental and Clinical Psychopharmacology*, 30(4), 424–431.

https://doi.org/10.1037/pha0000575

- Bergman, A. L., Christopher, M. S., & Bowen, S. (2016). Changes in facets of mindfulness predict stress and anger outcomes for police officers. *Mindfulness*, 7(4), 851–858. <a href="https://doi.org/10.1007/s12671-016-0522-z">https://doi.org/10.1007/s12671-016-0522-z</a>
- Boas, T. C., Christenson, D. P., & Glick, D. M. (2018). Recruiting large online samples in the United States and India: Facebook, Mechanical Turk, and Qualtrics. *Political Science Research and Methods*, 8(2), 232–250.

https://doi.org/10.1017/psrm.2018.28

- Carleton, R. N., Afifi, T. O., Taillieu, T., Turner, S., Mason, J. E., Ricciardelli, R., McCreary, D. R., Vaughan, A. D., Anderson, G. S., Krakauer, R. L., Donnelly, E. A., Camp, R. D., Groll, D., Cramm, H. A., MacPhee, R. S., & Griffiths, C. T. (2020). Assessing the relative impact of diverse stressors among public safety personnel. *International Journal of Environmental Research and Public Health, 17*(4), 1234. https://doi.org/10.3390/ijerph17041234
- Connecticut General Assembly. (n.d.). *Chapter 104–Municipal police and fire protection.* 
  - https://www.cga.ct.gov/current/pub/chap 104.htm#sec 7-291e
- Copenhaver, A., & Tewksbury, R. (2018). Predicting state police officer willingness to seek professional help for depression. *Criminology, Criminal Justice, Law & Society, 19*(1), 60–74.

- https://ccils.scholasticahg.com/article/34 46-predicting-state-police-officerwillingness-to-seek-professional-helpfor-depression
- Craddock, T. B., & Telesco, G. (2021). Police stress and deleterious outcomes: Efforts towards improving police mental health. Journal of Police and Criminal Psychology, 37(1), 173–182. https://doi.org/10.1007/s11896-021-09488-1
- Crowe, A., Averett, P., Bonner, H. S., & Franks, C. (2022). "Let them know it's okay to get help": Addressing the mental needs of police officers. Administration and Policy in Mental Health, 49(4), 613–622. https://doi.org/10.1007/s10488-022-

01187-1

- Drew, J. M., & Martin, S. (2021). A national study of police mental health in the USA: Stigma, mental health, and Help-Seeking Journal of Police and behaviors. *Criminal Psychology*, *36*(2), 295–306. https://doi.org/10.1007/s11896-020-09424-9
- Farrell, A. L., Monk-Turner, E., & Scallon, C. J. A. (2020). Utilizing Goffman's concepts of impression management and stigma in understanding the aftermath of officer-involved shootings: Exploring the intersection with masculinity. Psychology of Men & Masculinities, *21*(3), 392–400. https://doi.org/10.1037/men0000238

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. Behavior Research

*Methods*, 39(2), 175–191. https://doi.org/10.3758/bf03193146

Fry, L., & Berkes, L. (1983). The paramilitary police model: An organizational misfit. Human *Organization*, 42(3), 225–234.

- https://doi.org/10.17730/humo.42.3.v035 9336153w8243
- Grupe, D. W., Stoller, J. L., Alonso, C., McGehee, C., Smith, C., Mumford, J. A., Rosenkranz, M. A., & Davidson, R. J. (2021). The impact of mindfulness training on police officer stress, mental health, and salivary cortisol levels. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.7207 53
- Hopkins, W. G., & Walker, N. P. (1988). The meaning of "physical fitness." Preventive Medicine, 17(6), 764-773. https://doi.org/10.1016/0091-7435(88)90094-1
- Hyland, S. S., & Davis, E. (2019). Local police departments, 2016: Personnel. Bureau of Justice Statistics. https://bjs.ojp.gov/content/pub/pdf/lpd16 p.pdf
- Jetelina, K. K., Molsberry, R. J., Gonzalez, J. R., Beauchamp, A. M., & Hall, T. (2020). Prevalence of mental illness and mental health care use among police officers. JAMA Network Open, 3(10), e2019658. https://doi.org/10.1001/jamanetworkope n.2020.19658
- Kang, H. (2013). The prevention and handling of the missing data. Korean Journal of Anesthesiology, 64(5), 402. https://doi.org/10.4097/kjae.2013.64.5.4
- Martin, K., Siddiqui, A., Ricciardelli, R., Lentz, L., & Carleton, R. N. (2021). Differences in mental health, helpseeking and barriers to care between civilians and sworn members working in law enforcement: A Research Note. Journal of Police and Criminal Psychology, 36(3), 627–633. https://doi.org/10.1007/s11896-021-09437-y
- McCanlies, E. C., Gu, J. K., Andrew, M. E., Burchfiel, C. M., & Violanti, J. M. Resilience (2017).mediates the

relationship between social support and post-traumatic stress symptoms in police officers. *Journal of Emergency Management*, 15(2), 107.

https://doi.org/10.5055/jem.2017.0319

- McCraty, R., & Atkinson, M. M. (2012). Resilience training program reduces physiological and psychological stress in police officers. *Global Advances in Health and Medicine*, *I*(5), 44–66. https://doi.org/10.7453/gahmj.2012.1.5.0 13
- Miller, C. A., Guidry, J. P., Dahman, B., & Thomson, M. D. (2020). A tale of two diverse Qualtrics samples: Information for online survey researchers. *Cancer Epidemiology, Biomarkers & Prevention*, 29(4), 731–735.

https://doi.org/10.1158/1055-9965.epi-19-0846

Mourtgos, S. M., Adams, I. T., & Nix, J. (2021). Elevated police turnover following the summer of George Floyd protests: A synthetic control study. *Criminology & Public Policy*, 21(1), 9–33.

https://doi.org/10.1111/1745-9133.12556

Newell, C. J., Ricciardelli, R., Czarnuch, S. M., & Martin, K. (2021). Police staff and mental health: Barriers and recommendations for improving help-seeking. *Police Practice and Research*, 23(1), 111–124.

https://doi.org/10.1080/15614263.2021.1 979398

Padilla, K. E. (2023). A descriptive study of police officer access to mental health services. *Journal of Police and Criminal Psychology*.

https://doi.org/10.1007/s11896-023-09582-6

Papazoglou, K., & Andersen, J. P. (2014). A guide to utilizing police training as a tool to promote resilience and improve health outcomes among police officers.

*Traumatology: An International Journal,* 20(2), 103–111.

https://doi.org/10.1037/h0099394

Porter, C. N., & Lee, R. (2023). The policing culture: An exploration into the mental health of former British police officers. *Current Psychology*.

https://doi.org/10.1007/s12144-023-04365-v

Regmi, P. R., Waithaka, E., Paudyal, A., Simkhada, P., & Van Teijlingen, E. (2017). Guide to the design and application of online questionnaire surveys. *Nepal Journal of Epidemiology*, 6(4), 640–644.

https://doi.org/10.3126/nje.v6i4.17258

Rehder, K., Eddy, A., Kaplan, J., Bergman, A., & Christopher, M. (2021). The Relationships between reduced alcohol use and decreased burnout following mindfulness-based resilience training in law enforcement officers. *The Journal of Alternative and Complementary Medicine*, 27(11), 984–990.

https://doi.org/10.1089/acm.2021.0052

- Ribeiro, L., Colgan, D. D., Hoke, C. K., Hunsinger, M., Bowen, S., Oken, B. S., & Christopher, M. S. (2019). Differential impact of mindfulness practices on aggression among law enforcement officers. *Mindfulness*, *11*(3), 734–745. https://doi.org/10.1007/s12671-019-01289-2
- Soomro, S., & Yanos, P. T. (2018). Predictors of mental health stigma among police officers: The role of trauma and PTSD. *Journal of Police and Criminal Psychology*, 34(2), 175–183. <a href="https://doi.org/10.1007/s11896-018-9285-x">https://doi.org/10.1007/s11896-018-9285-x</a>
- Soravia, L. M., Schwab, S., Walther, S., & Müller, T. (2021). Rescuers at risk: Posttraumatic stress symptoms among police officers, firefighters, ambulance personnel, and emergency and

- psychiatric nurses. Frontiers in Psychiatry, 11.
- https://doi.org/10.3389/fpsyt.2020.60206
- Spence, D., & Drake, J. (2021). Law enforcement suicide: 2020 report to Congress. U.S. Department of Justice. <a href="https://cops.usdoj.gov/ric/Publications/cops-p429-pub.pdf">https://cops.usdoj.gov/ric/Publications/cops-p429-pub.pdf</a>
- Stancel, K., Russo, C., Koskelainen, M., Papazoglou, K., & Tuttle, B. M. (2019). Police moral injury, compassion fatigue, and compassion satisfaction: A brief report. *Salus Journal*, 7(1), 42–56. <a href="https://search.informit.org/doi/10.3316/INFORMIT.301282217090422">https://search.informit.org/doi/10.3316/INFORMIT.301282217090422</a>
- Stockemer, D. (2019). *Quantitative methods* for the social sciences. Springer.
- Stogner, J., Miller, B. L., & McLean, K. (2020). Police stress, mental health, and resiliency during the COVID-19 pandemic. *American Journal of Criminal Justice*, 45(4), 718–730. https://doi.org/10.1007/s12103-020-
- Stuart, H. (2017). Mental illness stigma expressed by police to police. *Israel Journal of Psychiatry and Related Sciences*, 54(1), 18–23.

09548-v

- https://cdn.doctorsonly.co.il/2017/08/04 Mental-Illness-Stigma.pdf
- Syed, S., Ashwick, R., Schlosser, M., Jones, R., Rowe, S., & Billings, J. (2020). Global prevalence and risk factors for mental health problems in police personnel: A systematic review and meta-

- analysis. *Occupational and Environ-mental Medicine*, 77(11), 737–747. https://doi.org/10.1136/oemed-2020-106498
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. <a href="https://doi.org/10.5116/ijme.4dfb.8dfd">https://doi.org/10.5116/ijme.4dfb.8dfd</a>
- United Nations Educational, Scientific and Cultural Organization. (n.d.). Educational Attainment UNESCO UIS. https://uis.unesco.org/en/topic/education al-attainment
- Violanti, J. M., Charles, L. E., McCanlies, E., Hartley, T. A., Baughman, P., Andrew, M. E., Fekedulegn, D., Ma, C. C., Mnatsakanova, A., & Burchfiel, C. M. (2017). Police stressors and health: a state-of-the-art review. *Policing*, 40(4), 642–656. https://doi.org/10.1108/pijpsm-06-2016-0097
- Violanti, J. M., & Steege, A. (2021). Law enforcement worker suicide: An updated national assessment. *Policing: An International Journal*, 44(1), 18–31. <a href="https://doi.org/10.1108/pijpsm-09-2019-0157">https://doi.org/10.1108/pijpsm-09-2019-0157</a>
- Youssef, N. A., Green, K. T., Beckham, J. C., & Elbogen, E. B. (2013). A 3-year longitudinal study examining the effect of resilience on suicidality in veterans. Annals of Clinical Psychiatry: Official Journal of the American Academy of Clinical Psychiatrists.
  - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3622865/