

The Mediating Effect of Self-Efficacy Between Secondary Traumatic Stress and Emotional Self-Regulation Among Forensic Examiners

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Abstract. This study was conducted to determine if there was a mediating effect of self-efficacy between secondary traumatic stress and emotional self-regulation among forensic examiners. It was conducted at the Regional Forensic Unit- National Capital Region and National Headquarters of PNP Forensic Group. Data were collected using simple random sampling from 173 designated forensic examiners with indirect trauma experiences. Mediation analysis was used to evaluate the data, using regression analysis and the Sobel Test. It was revealed that forensic examiners had little/no secondary traumatic stress, a high level of emotional self-regulation, and a high level of self-efficacy. It was also revealed that self-efficacy ($\beta = -0.334$, $p < .001$) was negatively related to emotional self-regulation with 11% of the variance, secondary traumatic stress ($\beta = 0.460$, $p < .001$) was positively related to emotional self-regulation with 21% of the variance, and secondary traumatic stress ($\beta = -0.195$, $p = .010$) was negatively related to self-efficacy with 3.8% of the variance. The self-efficacy partially mediates the relationship between secondary traumatic stress and emotional self-regulation by 10.7%, which indicates that while self-efficacy plays a significant impact, there is still a direct influence of secondary traumatic stress on emotional self-regulation. As an output of the study, the Forensic Mental Health: Psychoeducation and Trauma-Focused Intervention Program was proposed for forensic examiners to serve as a guide to develop and improve their self-efficacy and emotional self-regulation strategy in coping with the impact of secondary traumatic stress.

Keywords: Self-efficacy; Secondary traumatic stress; Emotional self-regulation; Mediation; Forensics.

1.0 Introduction

Secondary traumatic stress is recognized as a form of post-traumatic stress disorder (PTSD) that occurs as a result of repeated exposure to disturbing information about traumatic events (Jacob & Lambert, 2021). This behavior is prevalent among human service professionals who encountered significant demands in their roles, such as forensic examiners who had experienced secondary traumatic stress as a response to their regular exposure to clients' traumatic experiences. Forensic examiners encounter many stressors in their line of work. Factors contributing to stress in this field include the volume of cases, controversy, backlogs, dealing with violent crime scenes, strict adherence to perfection, and faced with rigorous court examinations. Professionals who worked in the field of law enforcement were at risk from indirect traumatic experiences as well as explicit information, especially when dealing with criminals who had traumatized themselves (Ko & Memon, 2023).

Scene of Crime Operations (SOCO), Disaster Victim Identifications (DVI), and Crime Scene Investigations (CSI) expose PNP forensic examiners to the various aspects of crime scenes, mass casualty incidents, and distressful

traumatic material. At the same time, they collect and preserve evidence, conduct extensive laboratory testing of physical and biological evidence, and testify as expert witnesses in court. The PNP Forensic Group is established as mandated by the RA 6975 Sec.35 NAPOLCOM Resolution 96-058 to strengthen the operational efficiency and efficacy of law enforcement by conducting laboratory examination, evaluation, and identification of physical evidence associated with criminal activities, with an emphasis on its chemical, biological, physical, and medical nature.

According to Plombon et al. (2023), the effectiveness of their work and their level of personal satisfaction as police investigators were affected by stress and trauma. Crime Scene Investigators were crucial to law enforcement and had a significant role in the investigation process. Additionally, Busey et al. (2022) stated that stressors of various forms were common in forensic laboratories and hurt individuals, the laboratory systems, and case evaluation findings. Almazrouei et al. (2020) also determined a lack of awareness regarding stressful circumstances at work and criticism even though forensic examiners performed their duties in a stressful environment. Forensic science decisions were affected by human factors and organizational stressors. Forensic examiners claimed that their high-stress levels were caused more by work-related issues such as management and supervision, backlogs, and the need to complete many cases than by their issues.

There have been relatively few local studies conducted in the Philippines among forensic examiners on how their work affects their mental health. Most of the research conducted on uniformed personnel exclusively focused on police officers. Goldstein and Alesbury (2021) revealed that considerably fewer studies had explored how professionals in forensics were affected. Forensic experts reported high levels of burnout and insufficient support for wellbeing at work. As a result, individuals have limited knowledge and lack awareness of how their work impacts their psychological well-being. The concerns regarding secondary trauma are not being addressed, and there is a need for an investigation into their capacity to be in control of their environment, to master the challenging demands of their field, and to control their emotional experience and expressions.

The study aimed to determine the overall levels of self-efficacy, secondary traumatic stress, and emotional self-regulation among forensic examiners who had experienced indirect exposure to traumatic events while performing their assigned duties, including forensic examinations, fieldwork, scene of crime operations, training, and research.

2.0 Methodology

2.1 Research Design

The study utilized the quantitative research approach. According to Brooke (2023), quantitative research was a systematic and objective strategy to gather and analyze numerical data. It provided a systematic and logical framework to obtain results. Mediation analysis was used to find out how self-efficacy impacted the relationship between secondary traumatic stress and emotional self-regulation in forensic experts who worked for the PNP Forensic Group in the National Capital Region and had experienced indirect trauma. According to Sidhu et al. (2021), mediation analysis examines the relationship between the independent and dependent variables when a mediator or intervening variables are present.

2.2 Research Locale

The study was conducted at the PNP Forensic Group, Camp BGen Rafael T Crame, Quezon City, and Regional Forensic Unit – National Capital Region. The selection of this unit/office in the National Capital Region as the research locale was based on the following: (1) the office/unit provided a scientific investigation, laboratory examinations, forensic services, and other technical support, (2) the PNP personnel were graduates of specialized training and designated as forensic examiners in their office, and (3) the forensic examiners were exposed to secondary traumatic stress in laboratory and fieldwork such as conducting scene of crime operations, disaster victim identification, and performing laboratory examinations on evidence that has been filed or gathered and is to be presented in court as an expert witness. Additionally, these offices/units were chosen since the researcher was affiliated with them as training staff with access to gather the respondents.

2.3 Research Participants

The study respondents were PNP uniformed and non-uniformed personnel designated as forensic examiners. Specifically, this includes individuals with expertise in Fingerprint Examination, Firearms Examination, Forensic Chemistry, Forensic DNA Analysis, Forensic Photography, Medico-Legal Examination, Physical Identification Examination, and Polygraph Examination. A fishbowl technique was used to choose the respondents. To obtain a sample of 173 forensic examiners, the G*Power Application was utilized to compute the sample size needed for the study. Based on post hoc analysis, the achieved power was .9955 in this mediation study based on a 0.37741 effect size ($\alpha=0.05$). Hence, the sample size was sufficient for the study.

2.4 Research Instrument

This study utilized three standardized tests to gather data and answer the research objectives. These adopted instruments measured the overall level of secondary traumatic stress, emotional self-regulation, and self-efficacy. Additionally, it aimed to determine the impact of secondary traumatic stress on emotional self-regulation and self-efficacy and the mediation effect of self-efficacy in the relationship between secondary traumatic stress and emotional self-regulation among forensic examiners.

Secondary Traumatic Stress Scale - DSM 5, developed by Bride (2013), to assess the effects of secondary trauma on forensic examiners. The scale has 20 items, divided into four subscales: intrusion, avoidance, negative cognition and mood, and arousal subscale. The total score was derived by adding the individual item scores of the scale, where a greater score signified an increased occurrence of symptoms. According to Sprang and Garcia (2022), the Secondary Traumatic Stress Scale developed by Bride (2013) consistently showed a high level of internal consistency with an alpha coefficient ranging from .92 to .96 in various research. Another standardized test used was the Difficulties in Emotion Regulation Scale (DERS-36), developed by Gratz and Roemer (2004) to measure overall emotional self-regulation. The DERS produced an overall score between 36 and 180; larger scores indicated greater emotional regulation challenges. The DERS revealed high internal consistency ($\alpha = 0.93$), and the total correlation between items varied between $r = .16$ and $r = .69$. Lastly, the study used the General Self-efficacy (GSE) scale of 10 items. The General Self-Efficacy (GSE) Scale was determined to be unidimensional based on the research conducted by Schwarzer and Jerusalem (1995, as cited in Lazić et al., 2021) with Cronbach's alpha ranging from .75 to .90. To predict both coping with day-to-day difficulties and adapting to a variety of stressful life events, the scale was developed to evaluate a general feeling of perceived self-efficacy. The answers to all ten items were summed to provide the final composite score, which varied from 10 to 40.

2.5 Data Gathering Procedure

First, the researcher asked for approval from the Director of the PNP Forensic Group to conduct the study among forensic examiners within the National Capital Region. Once the request was approved, the researcher asked the admin officers and training officers of the respective office/unit to provide data on personnel and the total number designated as forensic examiners. After that, the study utilized a simple random sampling using a fishbowl technique to include the number of respondents needed. Upon getting the respondents needed, the researcher started the data gathering. Since the researcher was designated as the training PNCO in the National Headquarters, PNP Forensic Group, he asked for help from the respective admin officers and training officers of the respondents to answer the research instrument. To consider the availability of respondents and not hinder their duties, the survey questionnaires were sent through Google Forms. Before answering the survey, the researcher provided a letter of informed consent indicating the purpose and background of the study. After accomplishing the informed consent, the respondents consecutively answered the three standardized instruments (i.e., General Self-efficacy Scale, Secondary Traumatic Stress Scale, and Difficulties in Emotion Regulation Scale). The output from the instruments included the respondents' (a) demographic profile, (b) overall level of self-efficacy, (c) overall level of secondary traumatic stress, and (d) overall level of emotional self-regulation. After recording the data gathered, it was sent to the statistician for analysis.

2.6 Ethical Considerations

This study provided informed consent to the respondents with information regarding the purpose and background of the study and obtained approval from the organization before data gathering. In data gathering, the privacy and identities of the respondents were maintained during this research. The obtained data and information were strictly confidential following the Data Privacy Act. Also, this study guaranteed that the authors

of the numerous publications and studies mentioned in this paper were properly cited and referenced. With the researcher's present affiliation in the organization as a training officer, the respondents were chosen from other office/unit assignments. They were also informed that their involvement in the research was completely voluntary and that they had the right to refuse to participate at any point that would not affect how the researcher treated them after granting informed consent.

3.0 Results and Discussion

3.1 Secondary Traumatic Stress (STS) among Forensic Examiners

Table 1 shows that overall secondary traumatic stress was Little/No (Mean=1.38, SD=.59) among forensic examiners. The symptoms experienced by forensic examiners have minimal impact on their level of secondary traumatic stress despite their work being consistently exposed to traumatic material and clients' traumatic experiences. The results imply that they still have developed symptoms at a low level.

Table 1. Level of secondary traumatic stress (STS) among forensic examiners

Indicative Statement	Mean	SD	Interpretation
1. I felt emotionally numb.	1.60	0.95	Little/No STS
2. My heart started pounding when I thought about my client's work.	1.51	0.88	Little/No STS
3. I seemed as if I was reliving the trauma(s) experienced by my client(s).	1.45	0.80	Little/No STS
4. I had trouble sleeping.	1.62	0.95	Little/No STS
5. Reminders of my work with clients upset me.	1.32	0.69	Little/No STS
6. I had little interest in being around others.	1.50	0.89	Little/No STS
7. I felt jumpy.	1.38	0.72	Little/No STS
8. I was less active than usual.	1.49	0.85	Little/No STS
9. I thought about my work with clients when I did not intend to.	1.43	0.78	Little/No STS
10. I had trouble concentrating.	1.46	0.77	Little/No STS
11. I avoided people, places, or things that reminded me of my client's work.	1.32	0.78	Little/No STS
12. I had disturbing dreams about my work with clients.	1.26	0.68	Little/No STS
13. I wanted to avoid working with some clients.	1.27	0.65	Little/No STS
14. I was easily annoyed.	1.38	0.77	Little/No STS
15. I expected something bad to happen.	1.27	0.64	Little/No STS
16. I noticed gaps in my memory about client sessions.	1.34	0.73	Little/No STS
17. I expected negative emotions.	1.44	0.74	Little/No STS
18. I engaged in reckless or self-destructive behavior.	1.21	0.52	Little/No STS
19. I unrealistically blamed others for the cause or consequences of the trauma(s) experienced by my client(s).	1.18	0.48	Little/No STS
20. I had negative expectations about myself, others, or the world.	1.21	0.54	Little/No STS
General Assessment	1.38	0.59	Little/No STS

The secondary traumatic stress in this sample can be attributed to the forensic examiners' features, organizational support, and training development given by the organization. Professional development and specialized training can help these examiners to prevent the severe impact of trauma exposures. With their knowledge and technical skills in forensics, they can manage and recover more effectively from indirect trauma exposures, reducing the likelihood that they would suffer from severe psychological distress. Zeybek et al. (2023) disclosed that strengthening one's professional skills and aligning them with one's educational background positively impacts compassion fatigue and burnout. Additionally, Sutton et al. (2022) mentioned that specialized training in trauma could be helpful for individuals experiencing secondary traumatic stress (STS). Embracing a culture that acknowledges and validates the presence and manifestation of STS can significantly enhance employee health. Knowing STS and its manifestations can assist individuals in validating their emotions by recognizing that their feelings are not exclusive to them. This enables individuals to accept these emotions as typical aspects of their work without fear of being branded as weak or unsuited.

3.2. Emotional Self-Regulation (ESR) among Forensic Examiners with Indirect Trauma Experience

Emotional Self-Regulation was High (Mean=1.88, SD=.51) among forensic examiners with indirect trauma experience, as shown in Table 2. Forensic examiners may face challenges in understanding and recognizing their own emotions due to exposure to stressful situations. It also indicates that these forensic experts are trying to conceal their feelings and try to inhibit disclosure of their true feelings or are choosing to ignore them, which may lead to reluctance to seek organizational support for their mental health. Despite this difficulty, they show that they can control their emotions, especially when exposed to traumatic material or indirect trauma caused by client's personal experiences. This demonstrates the resilience and adaptability of forensic experts with effective

coping mechanisms to maintain professionalism and balance emotions when confronted with challenging situations.

Table 2. Level of emotional self-regulation (ESR) among forensic examiners with indirect trauma experience

Indicative Statement	Mean	SD	Interpretation
1. I am clear about my feelings (R).	2.27	1.39	High ESR
2. I pay attention to how I feel (R).	2.43	1.38	High ESR
3. I experience my emotions as overwhelming and out of control.	1.64	1.01	Very High ESR
4. I had no idea how I was feeling.	1.47	0.86	Very High ESR
5. I have difficulty making sense out of my feelings.	1.47	0.87	Very High ESR
6. I am attentive to my feelings (R).	2.54	1.45	High ESR
7. I know exactly how I am feeling (R).	2.29	1.44	High ESR
8. I care about what I am feeling (R).	2.34	1.42	High ESR
9. I am confused about how I feel.	1.71	1.11	Very High ESR
10. I acknowledge my emotions (R) when I am upset.	3.05	1.47	Average ESR
11. When I am upset, I become angry with myself for feeling that way.	1.55	0.82	Very High ESR
12. When I am upset, I become embarrassed for feeling that way.	1.58	0.92	Very High ESR
13. When I am upset, I have difficulty getting work done.	1.53	0.85	Very High ESR
14. When I am upset, I become out of control.	1.31	0.70	Very High ESR
15. When I am upset, I believe I will remain that way for a long time.	1.42	0.90	Very High ESR
16. When I am upset, I believe that I will end up feeling very depressed.	1.36	0.85	Very High ESR
17. When I am upset, I believe my feelings are valid and important (R).	3.73	1.40	Low ESR
18. I have difficulty focusing on other things when I am upset.	1.56	0.82	Very High ESR
19. When I am upset, I feel out of control.	1.29	0.71	Very High ESR
20. When I am upset, I can still get things done (R).	2.75	1.58	Average ESR
21. When I am upset, I feel ashamed of myself for feeling that way.	1.64	0.94	Very High ESR
22. When I am upset, I know I can eventually find a way to feel better (R).	2.57	1.56	Average ESR
23. When I am upset, I feel like I am weak.	1.62	0.88	Very High ESR
24. I feel like I can control my behaviors (R) when I am upset.	2.74	1.60	Average ESR
25. I feel guilty for feeling that way when I am upset.	1.70	0.99	Very High ESR
26. When I am upset, I have difficulty concentrating.	1.61	0.82	Very High ESR
27. When I am upset, I have difficulty controlling my behaviors.	1.41	0.79	Very High ESR
28. When I am upset, I believe that there is nothing I can do to make myself feel better.	1.40	0.91	Very High ESR
29. When I am upset, I become irritated with myself for feeling that way.	1.47	0.83	Very High ESR
30. When I am upset, I feel very bad about myself.	1.39	0.77	Very High ESR
31. When I am upset, I believe that wallowing in it is all I can do.	1.48	0.86	Very High ESR
32. When I am upset, I lose control over my behaviors.	1.29	0.65	Very High ESR
33. I have difficulty thinking about anything else when I am upset.	1.42	0.74	Very High ESR
34. When I am upset, I figure out what I feel (R).	3.70	1.46	Low ESR
35. When I am upset, it takes me a long time to feel better.	1.51	0.87	Very High ESR
36. When I am upset, my emotions feel overwhelming.	1.48	0.80	Very High ESR
General Assessment	1.88	0.51	High ESR

Redmond et al. (2023) mentioned that police officers frequently felt unsafe or uncomfortable in seeking support for their mental health due to their organizational culture, workplace conditions, stigma, and individual response. Acknowledgment of the occupational or safety concern, recognition of the difficulties in policing, and reducing the stigma related to mental health were necessary to develop a consistently successful approach to police officers' well-being and mental health. Craven et al. (2022) also disclosed that crime scene investigators could deal with the emotional demands of their jobs when they could effectively manage their emotions, demonstrated resilience, had supportive coworkers, felt in control of their work environment, and found fulfillment in their work.

3.3. Self-Efficacy among Forensic Examiners with Indirect Trauma Experience

The results in Table 3 show that Self-efficacy was High (Mean=3.37, SD=.71) among forensic examiners with indirect trauma experience. Forensic examiners are exceptionally adept at solving problems, which shows they are confident in their ability to deal with problems and find effective solutions. Forensic examiners strongly believe in their capacity to accomplish tasks and succeed in various challenges encountered within the forensic field. They perceive difficulties as opportunities to innovate and resolve issues. When faced with adversity, they demonstrate flexibility and adaptability, as well as an openness to new ideas to accomplish their established objectives, demonstrating a belief in one's ability to take control of their surroundings and oneself.

The findings were supported by Syakdiah et al. (2024), who found that individuals with higher levels of self-efficacy were more satisfied with their jobs and personal lives, indicating that they could balance their time

between family and work. This implied that people with higher levels of self-efficacy had a better work-life balance because they were frequently more convinced in their ability to execute difficult tasks and deal with unexpected challenges.

Table 3. Level of self-efficacy among forensic examiners with indirect trauma experience

Indicative Statement	Mean	SD	Interpretation
1. I can always solve difficult problems if I try hard enough.	3.47	0.85	High Self-Efficacy
2. If someone opposes me, I can find the means and ways to get what I want.	2.75	1.20	High Self-Efficacy
3. It is easy for me to stick to my aims and accomplish my goals.	3.37	0.87	High Self-Efficacy
4. I am confident that I can deal efficiently with unexpected events.	3.39	0.85	High Self-Efficacy
5. I know how to handle unforeseen situations thanks to my resourcefulness.	3.37	0.86	High Self-Efficacy
6. I can solve most problems if I invest the necessary effort.	3.47	0.85	High Self-Efficacy
7. I can remain calm when facing difficulties because I can rely on my coping abilities.	3.45	0.81	High Self-Efficacy
8. When I am confronted with a problem, I can usually find several solutions.	3.48	0.78	High Self-Efficacy
9. If I am in trouble, I can usually think of a solution.	3.51	0.78	High Self-Efficacy
10. I can usually handle whatever comes my way.	3.49	0.78	High Self-Efficacy
General Assessment	3.37	0.71	High Self-Efficacy

Additionally, Garza (2023) stated that law enforcement officers with high self-efficacy levels have reduced levels of anxiety and negative emotions. Those with poor self-efficacy, on the other hand, are more likely to experience anxiety and burnout. Similarly, Huard et al. (2021) observed that self-efficacy's emotional abilities were positively associated with psychological well-being and adversely related to psychological stress.

3.4. Impact of Self-Efficacy on Emotional Self-Regulation of Forensic Examiners

As shown in Table 4, Self-efficacy significantly impacted the emotional self-regulation of forensic examiners. Data analysis showed that every 1 unit increase in Self-Efficacy scores led to a -0.243-point decrease in Emotional Self-Regulation scores.

Table 4. Analysis of the impact of self-efficacy on emotional self-regulation of forensic examiners

Model	Unstandardized B Coefficients	Standardized Beta Coefficients	p-value	R-square
1 (Constant)	2.700		<.001	0.111
Self-Efficacy	-0.243	-0.334	<.001	

In this case, Self-Efficacy ($\beta = -0.334$, $p < .001$) was negatively related to Emotional Self-Regulation. The r-square = .111 signified that about 11% of the variability of Emotional Self-Regulation can be explained by Self-Efficacy, and other variables can explain 89%. The levels of forensic examiners' self-efficacy impact their emotional self-regulation. Forensic examiners may experience higher levels of self-efficacy when they have lower levels of difficulty in regulating their emotions. Conversely, when forensic examiners' difficulties in emotional self-regulation increase, their self-efficacy decreases. This gives us the idea that if forensic examiners have strong beliefs in their capacity to achieve their desired goals and are resilient in the face of challenges, they can regulate their emotions and cope effectively when exposed to indirect trauma. Self-efficacy functions as a safeguard against the negative consequences of emotional stress and trauma, which leads to better psychological well-being and job success in the role of forensic examiner. Namaziandost et al. (2023) showed that participants' Emotional Regulation had a significant impact on the participants' Self-efficacy, Work Engagement, and levels of anger. Individuals should focus on regulating their emotions on the job to increase their self-efficacy, manage work-related stress, and reduce anger.

3.5. Impact of Secondary Traumatic Stress on Emotional Self-Regulation of Forensic Examiners

Table 5 shows that Secondary Traumatic Stress ($\beta = 0.460$, $p < .001$) was positively related to Emotional Self-Regulation. Data analysis showed that every 1 unit increase in Secondary Traumatic Stress scores led to a .401-point increase in Emotional Self-Regulation scores.

Table 5. Analysis of the impact of secondary traumatic stress on emotional self-regulation of forensic examiners

Model	Unstandardized B Coefficients	Standardized Beta Coefficients	p-value	R-square
1 (Constant)	1.327		<.001	0.212
Secondary Traumatic Stress	0.401	0.460	<.001	

The r-square = .212 signified that about 21% of the variability of Emotional Self-Regulation can be explained by Secondary Traumatic Stress, and other variables can explain 79%. The levels of secondary traumatic stress

experienced by forensic examiners affect their levels of difficulty in emotional self-regulation when dealing with clients' traumatic experiences. When forensic examiners experience high levels of secondary traumatic stress, they have high levels of difficulty regulating their emotions. They may find it challenging to remain focused and control their reactions when faced with the traumatic experiences of their clients due to these increased levels of emotional difficulties. On the other hand, forensic examiners who have lower levels of secondary traumatic stress have better skills to manage their emotional self-regulation effectively. They are more capable of keeping their emotions balanced and controlled in the face of traumatic and stressful experiences of their clients. Improved emotional regulation enables these individuals to focus and accomplish desired goals as forensic examiners. In support of this, Guler et al. (2024) disclosed that higher levels of overall emotional dysregulation had a positive significant relationship with the severity of traumatic symptoms. Tessitore et al. (2023) also mentioned that secondary traumatic stress could lead to problems controlling emotions.

3.6. Impact of Secondary Traumatic Stress on Self-efficacy of Forensic Examiners

Table 6 shows that Secondary Traumatic Stress ($\beta=-0.195$, $p=.010$) was negatively related to Self-Efficacy. Data analysis showed that every 1 unit increase in Secondary Traumatic Stress scores led to a -0.234-point decrease in Self-Efficacy scores.

Table 6. Analysis of the impact of secondary traumatic stress on self-efficacy of forensic examiners

Model	Unstandardized B Coefficients	Standardized Beta Coefficients	p-value	R-square
1 (Constant)	3.697		<.001	0.038
Secondary Traumatic Stress	-0.234	-0.195	.010	

The r-square= .038 signified Secondary Traumatic Stress, which can explain about 3.8% of the variability of Self-Efficacy, and other variables could explain 96.2%. When the level of secondary traumatic stress increases, the level of self-efficacy decreases due to being indirectly exposed to the trauma of their clients. In that case, there are some serious risks for their professional tasks in laboratory examinations, forensic investigations, and other frontline forensic services. They tend to avoid establishing goals, potentially impacting their credibility as expert witnesses in court procedures. Conversely, when the levels of secondary traumatic stress decrease, self-efficacy increases, and forensic examiners can effectively manage and overcome the stress associated with their work. They are more inclined to take on their task with credibility, make sound decisions, and efficiently handle the challenges of their profession. To support these findings, Ries et al. (2021) stated that a low level of felt stress was significantly correlated with high levels of general self-efficacy. A highly experienced level of stress also had a positive relationship with neuroticism and openness to new experiences. Baierlein (2022) also revealed that greater levels of coping were linked to reduced levels of Secondary Traumatic Stress.

3.7. Mediating Effect of Self-Efficacy to Secondary Traumatic Stress and Emotional Self-Regulation of Forensic Examiners

Table 7. Mediation analysis of the effect of self-efficacy to secondary traumatic stress and emotional self-regulation of forensic examiners

	Label	Estimate	SE	95% Confidence Interval		Z	P-value	% Mediation
Mediation Estimates								
Indirect	a x b	0.04	0.02	Lower 0.01	Upper 0.08	2.66	0.008	10.7
Direct	c	0.36	0.06	0.24	0.47	6.33	<.001	89.3
Total	c + a x b	0.40	0.05	0.29	0.51	7.30	<.001	100
Path Estimates								
Secondary Traumatic Stress → Self-Efficacy	a	-0.23	0.07	-0.37	-0.09	-3.28	0.001	
Self-Efficacy → Emotional Self-Regulation	b	-0.18	0.04	-0.26	-0.10	-4.57	<.001	
Secondary Traumatic Stress → Emotional Self-Regulation	c	0.35	0.06	0.24	0.47	6.33	<.001	
Regression								
	t value	Sobel Test Test Statistics		p-value		Decisions	Remarks	
Secondary Traumatic Stress and Self-efficacy	-.234	2.15		0.03		Reject Ho	Significant	
Self-efficacy and Emotional Self-Regulation	-.184							
Mediator: Self-efficacy level		Critical value = 1.96						

As shown in Table 7, the total effect of Secondary Traumatic Stress on Emotional Self-Regulation was significant ($\beta=0.4010$, $z=7.30$, $p<.001$). With the inclusion of the mediation variable (Self-Efficacy), the impact of Secondary Traumatic Stress on Emotional Self-Regulation was still significant ($\beta=0.352$, $z=6.33$, $p<.001$). The indirect effect on Emotional Self-Regulation through Self-Efficacy was significant ($\beta=0.0431$, $z=2.66$, $p=.008$). The bias-corrected bootstrap confidence interval for the indirect effect was based on 1,000 bootstrap samples and was entirely above 0 (0.0135 to 0.0793). This showed that Self-Efficacy partially mediated the relationship between Secondary Traumatic Stress and Emotional Self-Regulation by 10.7%. There is a significant relationship between secondary traumatic stress and emotional self-regulation among forensic examiners, both directly and indirectly, through the mediating effect of self-efficacy. Specifically, when forensic examiners experience high levels of secondary traumatic stress, it tends to diminish their self-efficacy, which subsequently leads to difficulties in regulating their emotions. This underscores the importance of self-efficacy in forensic examiners coping with the emotional consequences of secondary traumatic stress, affecting their ability to manage their emotions effectively. Those with greater self-efficacy are better equipped to regulate their emotions, even in the face of secondary traumatic stress. These findings were supported by Ali (2023) and Norouzinia et al. (2021) that secondary traumatic stress had a negative significant relationship with self-efficacy. Dehghan et al. (2023) disclosed that self-efficacy had a negative significant relationship with emotion regulation, and Cemgil (2019) found a significant positive correlation between secondary traumatic stress and emotion regulation, which stated that the level of STS symptoms due to consistent exposures to indirect trauma affected their emotional control and responses.

3.8. Proposed Program

Table 8. The proposed program

Area of Concern	Objectives	Activities/ Strategies	Person Involved	Time Frame	Source of Fund	Success Indicators
Level of Negative Cognitions and Mood among Forensic Examiners	To assist the organization in dealing with the effects of secondary traumatic stress in the workplace and to obtain data regarding the forensic examiners' present mental health.	Psychological testing and assessment (individual and/or group)	PNP Forensic Group	Semi-annual	PNP Forensic Group Budget and Fiscal Office	- Number of forensic examiners successfully undergone psychological assessment and psychoeducation.
		Psychoeducation on the impact of Secondary Traumatic Stress	PNP Health Service	Monthly		- Number of personnel identified with severe symptoms of STS.
		Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) for personnel with severe symptoms.		Depends on the symptomatology and treatment plan		- Number of personnel recovered from severe symptoms of STS through TF-CBT.
Level of Impulse Control Difficulties among Forensic Examiner	To recognize and validate their emotions following secondhand traumatic experiences. To help the forensic examiners deal with their negative beliefs or thoughts.	Stress management includes daily physical activities and mindfulness.	PNP Forensic Group	Daily	PNP Forensic Group Budget and Fiscal Office	- Number of personnel who participated in the activity and personnel with improved levels of emotional regulation.
		Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) for personnel with high difficulties in regulating their emotions.	PNP Health Service	Depends on the treatment plan		- Number of personnel recovered through TF-CBT.
Level of Optimistic Self-Beliefs among Forensic Examiners	To help forensic examiners strengthen their beliefs to succeed and overcome challenges.	Training and Development Program	Training and Development Section	Quarterly	PNP Forensic Group Budget and Fiscal Office	- A number of specialized training sessions were conducted, and personnel were trained.

In Table 8, the proposed Forensic Mental Health: Psychoeducation and Trauma-Focused Intervention Program comprised three areas of concern: Level of Negative Cognitions and Mood, Impulse Control Difficulties, and Optimistic Self-Beliefs. The forensic examiners of PNP Forensic Group were consistently exposed to secondary traumatic stress as part of their work in laboratory examination, fieldwork, and other frontline forensic services. This study proposed program aims to help forensic examiners develop their levels of self-efficacy and emotional

self-regulation as protective factors to cope with the impact of secondary traumatic stress in forensics. Regarding this, the focus was to educate the examiners on the impact of their nature of work on their mental health and to provide intervention to individuals with severe symptoms to address its impact.

4.0 Conclusion

Forensic examiners have high emotional self-regulation that leads them to effectively cope and control their emotions when exposed to traumatic material or indirect trauma and high self-efficacy that drives them to have a strong belief to succeed and accomplish the task. This leads them to demonstrate flexibility and adaptability, and they are open to new ideas to achieve the goals that they have set for themselves. The secondary traumatic stress experienced by forensic examiners positively impacts the level of difficulty in emotional self-regulation and negatively impacts self-efficacy. Also, self-efficacy tends to significantly impact emotional self-regulation, where higher levels of self-efficacy lead to lower difficulties in regulating emotions. Furthermore, levels of self-efficacy tend to have a partial and significant mediating effect between levels of secondary traumatic stress and emotional self-regulation, which means the impact of secondary traumatic stress on emotional self-regulation cannot be fully mediated by self-efficacy; even without self-efficacy, secondary traumatic stress can still significantly impact the emotional self-regulation of forensic examiners.

5.0 Contributions of Authors

The author contributed to each section of this paper. The author reviewed and approved the final work.

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7.0 Conflict of Interests

The author disclosed no potential conflict of interest.

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