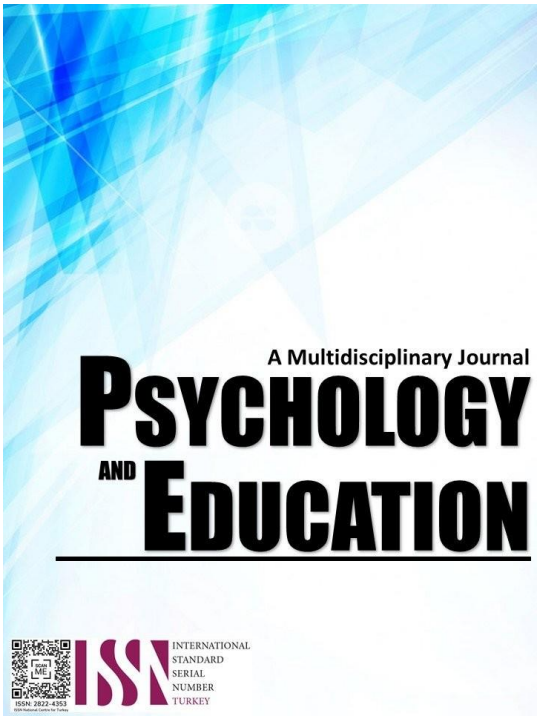
SECONDARY TRAUMATIC STRESS AND INTERNALIZING SYMPTOMS OF MENTAL HEALTH PRACTITIONERS: THE MEDIATING ROLE OF RUMINATION



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Research Article

Secondary Traumatic Stress and Internalizing Symptoms of Mental Health Practitioners: The Mediating Role of Rumination

Jireh Joy B. Albania,* John Mark S. Distor
For affiliations and correspondence, see the last page.

Abstract

Based on the transdiagnostic model of rumination and empathy-based stress process, this study examined the mediating role of rumination components (reflection and brooding) in the association of secondary traumatic stress with internalizing symptoms of depression and anxiety among Filipino psychosocial mental health practitioners such as psychometricians, psychologists, guidance counselors, and social workers. A total of 192 practitioners recruited from their respective professional organizations answered the online survey. The means and standard deviations were calculated to describe the levels of the study variables. Pearson Product Moment Correlation was employed to examine correlations. Standard (Delta) method was used to examine the multiple mediator model, and bias-corrected (BC) bootstrapping was employed to test the significance of the reflection and brooding indirect effects. The results showed practitioners' mild levels of secondary traumatic stress (M = 36.40, SD = 10.60), reflection (M = 11.00, SD = 3.54), brooding (M = 10.20, SD = 3.48), and internalizing symptoms (M = 12.00, SD = 9.98). All variables were significantly and positively associated with each other (r = 0.40 – 0.77, p <.001). Brooding (B = 0.15, 95% CI = 0.08, 0.25, p <.001), and not reflection (B = 0.02, 95% CI = - 0.02, 0.06, p = 0.47), was a significant partial mediator in the association of secondary traumatic stress with internalizing symptoms, suggesting that managing brooding tendencies may help prevent internalizing symptoms when secondary traumatic stress pre-exists. The findings supported brooding as a maladaptive component of rumination, while it is argued that reflection is more neutral than adaptive when it concurrently happens with brooding, and depending on the contents of reflective thinking determines its nature and well-being outcomes. Theoretical implications, methodological limitations, and ways forward in the Philippine context were also offered.

Keywords: *rumination, secondary traumatic stress, internalizing symptoms, Filipino mental health practitioners, multiple mediator model*

Introduction

In the Philippines, the implementation of the Mental Health Act (2018) committed to providing accessible, quality, and rights-based mental health and psychosocial services (Lally et al., 2019) to an estimated 3.6 million Filipinos with mental health conditions (Department of Health [DOH], 2020) through the mental health practitioners from the (a) medical field e.g., psychiatrists, neurologists, nurses, and other medical professionals; (b) psychosocial field, e.g., psychology practitioners (psychologists and psychometricians), social workers, and guidance counselors; and (c) others, e.g., volunteers, advocates, and appropriately trained and qualified persons (DOH, 2019). Despite the multidisciplinary approach to mental health, the recent situational assessment underreported statistics on psychosocial mental health practitioners (i.e., without generalist social workers, guidance counselors, and psychometricians; World Health Organization [WHO] & DOH, 2020) despite non-physician healthcare workers and counselors were included as mental health service providers in a previous situational assessment (WHO & DOH, 2006). Aside from this gap, the Act lacks proactive mechanisms in promoting the practitioners' mental health and preventing mental health conditions which were reflected on national implementation plans (WHO, 2022). Promoting the practitioners' wellness was often overlooked in policy making and implementation in a global scale (Abdul Rahim et al., 2022) as there were calls for urgent prioritization for the mental health of healthcare practitioners (Søvold et al., 2021), and integration of self-care programs in the system of professional organizations (Posluns & Gall, 2019). Delivering mental health services takes a toll on the practitioners' well-being. Global prevalence of internalizing symptoms of depression and anxiety were found for healthcare workers (Rezaei et al., 2022; Fernandez et al., 2021) and for social workers and psychologists in the United States (Siebert, 2004; Gilroy et al., 2002). Yet, the development of internalizing symptoms among psychosocial mental health practitioners remains unexplored in the Philippines.

To explore how internalizing symptoms develop among this group, the model of empathy-based stress process (Rauvola et al., 2019) and the transdiagnostic model of rumination (Nolen-Hoeksema & Watkins, 2011) were harmonized. Generally, the harmonization suggests that mental health conditions are occupational well-being outcomes which occur when there is a history of unavoidable stressors (distal risk factor), and its impacts were enabled by a person's psychological functioning (proximal risk factors). In mental health services delivery, secondary traumatic stress (Sprang et al., 2018) was considered as a distal risk factor as it normally comes in mental health work (Key & Rider, 2018). Secondary traumatic stress happens when a practitioner experiences mirroring the trauma symptoms of their clients (Bride, 2007; Henderson et al., 2024) due to prolonged empathic engagements. Secondary traumatic stress comes with internalizing symptoms of depression and anxiety (Ewer et al., 2015; Quinn et al., 2018; Jin et al., 2020), especially when practitioners tend to ruminate over their experiences (proximal risk factor; Lyubomirsky et al., 2015; Mullen et al., 2020; Zarei & Fooladvand, 2022). Rumination is the repetitive thinking over the circumstances, causes, consequences, and meanings of emotionally

distressing events (Watkins & Roberts, 2020) which had two distinct components namely brooding and reflection (Treynor et al., 2003). Reflection was proposed as an adaptive function of rumination which is intentionally analyzing the causes of experienced emotional distress while brooding is the maladaptive one, which is thinking passively about problems and their costs (Luca, 2019).

Research Questions

The present study aimed to concurrently test the mediating role of each rumination component (reflection and brooding) in the association of secondary traumatic stress with internalizing symptoms of depression and anxiety. To simply speak, it aimed to show how internalizing symptoms develop through rumination when practitioners experience secondary traumatic stress in mental health work. Specifically, it aimed to answer the research questions:

1. What are the levels of secondary traumatic stress, internalizing symptoms, and rumination (in terms of reflection and brooding) of the respondents?
2. Are there significant associations between secondary traumatic stress, internalizing symptoms, reflection, and brooding?
3. Does rumination mediate the association of secondary traumatic stress and internalizing symptoms through its reflection and brooding components?

Methodology

Research Design

The study was designed as cross-sectional survey research (Creswell & Creswell, 2018) to test the harmonized model of empathy-based stress process and the transdiagnostic model of rumination (Rauvola et al., 2019; Nolen-Hoeksema & Watkins, 2011) through conducting a multiple mediation analysis (Frazier et al., 2004; Preacher & Hayes, 2008). The data were gathered within a single point of time (June to October 2023) through an online survey form. The data were analyzed using statistical procedures in Jamovi version 2.3.28 (Jamovi Project, 2022; R Core Team, 2021). This research design was appropriate for addressing the research objectives; however, potential limitations were expected such as respondent bias in answering, and limited contextual information about participants (Andrade, 2020). To help address these limitations, a two-phased participant screening process was included the survey form and participants were recruited from their respective professional organizations.

Respondents

Purposive sampling was used in recruiting participants with the following inclusion criteria: (1) a professional license holder of any of the following professions - psychologist, psychometrician, social worker, and guidance counselor in the Philippines; (2) working in either public or private organizations; (3) clients handled were within the mental health spectrum and may have disability, distress, trauma, or psychosocial problems (United Nations Children's Fund [UNICEF], 2018, 2019) and (4) worked with clients for at least a month. Professionals without direct and empathic engagements with clients were excluded in participating.

Table 1. *Description of Respondents*

Nationality	Filipino	N 192	% 100
		N	*%*
Sex	Female	158	82.29
	Male	34	17.71
		N	*%*
Civil status	Single	142	73.96
	Married	43	22.40
	Widowed	3	1.56
	Separated	4	2.08
		N	%
Highest educational attainment	Bachelor's degree	32	16.67
	Discontinued Master's Program (with obtained units)	1	0.52
	Ongoing Master's Program	73	38.02
	Master's Degree	55	28.65
	Ongoing Doctoral Program	18	9.38
	Doctorate Level	3	1.56
	Others	10	5.21

		Permanent address		*Place of work*	
		N	%	N	%
Philippine Regions	CAR	19	9.9	15	7.81
	NCR	40	20.83	65	33.85
	Region I	11	5.73	9	4.69
	Region II	7	3.65	8	4.17

	Region III	27	14.06	21	10.94	
	Region IV-A	28	14.58	14	7.29	
	Region IV-B	5	2.6	7	3.65	
	Region V	6	3.13	4	2.08	
	Region VI	7	3.65	6	3.13	
	Region VII	5	2.6	6	3.13	
	Region VIII	4	2.08	4	2.08	
	Region IX	9	4.69	10	5.21	
	Region X	5	2.6	4	2.08	
	Region XI	12	6.25	12	6.25	
	Region XII	2	1.04	2	1.04	
	Region XIII	2	1.04	2	1.04	
	BARMM	3	1.56	3	1.56	

		Practiced in work		*All obtained*	
		N	%	N	%
Professions	Psychologist	21	10.94	7	3.65
	Psychologist and psychometrician			12	6.25
	Psychologist, psychometrician, and guidance counselor			1	0.52
	Psychologist and guidance counselor			1	0.52
	Psychologist, guidance counselor, and social worker			1	0.52
	Psychologist and social worker			1	0.52
	Psychometrician	99	51.56	95	49.48
	Psychometrician and guidance counselor			5	2.60
	Psychometrician, guidance counselor, and teacher			2	1.04
	Psychometrician and teacher			3	1.56
	Guidance counselor	35	18.23	25	13.02
	Guidance counselor and teacher			3	1.56
	Social worker	37	19.27	35	18.23
	Social worker and nurse			1	0.52

		N	*%*
Work setting	Private or non-government agency	66	34.38
	Public or government agency	126	65.63

		N	*%*
Status of work	Full time	157	81.77
	Part time	19	9.90
	Volunteer work	16	8.33

		N	*%*
Type of organization	Advocacy groups	5	2.60
	Alcohol and drug rehabilitation facilities	5	2.60
	Centers	23	11.98
	Combined settings (more than one type of organization)	2	1.04
	Community-based	3	1.56
	Employee assistance program	2	1.04
	General hospital setting	12	6.25
	Guidance and counselling or school-based	51	26.56
	Human resources	7	3.65
	International agencies	1	0.52
	Local government unit	13	6.77
	National government agencies	19	9.90
	Private practice	13	6.77
	Psychiatric hospitals	4	2.08
	Residential care facilities	31	16.15
	Spiritual-based	1	0.52

		N	*%*
Monthly income	₱ 13,000 to ₱ 23,176 (SG 1 – 10)	63	32.81
	₱ 27,000 to ₱ 46,725 (SG 11 – 18)	119	61.98
	₱ 51,357 to ₱ 90,078 (SG 19 – 24)	8	4.17
	₱ 102,690 to ₱ 148,171 (SG 25 – 28)	2	1.04

Clinical supervision	*N*	*%*

	With clinical supervision	108	56.25
	Without clinical supervision	84	43.75
		N	*%*
Handled clientele group	Across developmental stages	4	2.08
	Newborns, infants, children, and adolescents	2	1.04
	Newborns, infants, children, adolescents, and adults	1	0.52
	Newborns, infants, children, and adults	1	0.52
	Infants, children, adolescents, adults, and older adults	1	0.52
	Children	3	1.56
	Children and adolescents	15	7.81
	Children, adolescents, and adults	27	14.06
	Children, adolescents, adults, and older adults	17	8.85
	Adolescents	19	9.90
	Adolescents and adults	46	23.96
	Adolescents, adults, and older adults	12	6.25
	Adults	34	17.71
	Adults and older adults	8	4.17
	Older adults	2	1.04
		N	*%*
Sex of handled clients	Both males and females	165	85.94
	Females only	13	6.77
	Males only	14	7.29
		N	*%*
Client died by suicide	Had a client who died by suicide	19	9.90
	Did not have a client who died by suicide	173	90.10

		Personal		*Work exposure*	
		N	%	N	%
Traumatic events	Natural disasters or calamities	140	72.92	40	20.83
	Fire or explosion	21	10.94	16	8.33
	Accidents during transportation	57	29.69	15	7.81
	Having serious accidents	30	15.63	15	7.81
	Being exposed to toxic substances	7	3.65	11	5.73
	Being physically assaulted	45	23.44	48	25.00
	Being assaulted with a weapon	15	7.81	27	14.06
	Being sexually assaulted	26	13.54	66	34.38
	Other unwanted sexual experience	68	35.42	54	28.13
	Combat or exposure to a warzone	9	4.69	14	7.29
	Being held captive	1	0.52	12	6.25
	Having life-threatening illness or injury	37	19.27	38	19.79
	Having severe human suffering	13	6.77	49	25.52
	Experience of sudden violent death	4	2.08	44	22.92
	Experience of sudden accidental death	5	2.60	29	15.10
	Serious harm or death their clients caused to others	6	3.13	11	5.73
	Any other very stressful events	108	56.25	66	34.38

A total of 192 Filipino psychosocial mental health practitioners participated from their respective professional organizations such as the Philippine Association of Social Workers, Inc. (PASWI), and Philippine Guidance and Counseling Association (PGCA), and Psychological Association of the Philippines Psych Practitioners in Public Service Special Interest Group (PAP PPPubServ SIG). Their mean age was 31.4 years (SD = 8.07), and the majority were females. Most were single while the least were widowed. In terms of education, the majority have an ongoing master's degree program while the least discontinued it. Most practitioners permanently resided and worked in NCR while the least were in SOCCSKSARGEN and CARAGA. For practitioners with multiple professional licenses, most obtained both psychologist and psychometrician professions but the majority were practicing psychometricians in their work. Most were in the public service and worked full-time. Most were in guidance and counselling or school-based settings. Per month, most practitioners earned within ₱ 27,000 to ₱ 46,725 or salary grade (SG) 11 to 18, indicating that they are in the bracket of lower to middle of the middle-income class based on the indicative range for 2017 prices (Albert et al., 2018). Most reported having clinical supervision. In terms of workload indicators, the practitioners worked 40 hours per week (Mdn = 40.00, SD = 22.70), with approximately 24 caseloads (Mdn = 23.50, SD = 219.00), and have 4.67 years of practice in the delivery of mental health services (MdnMonths = 56.00, SD = 70.90). Similar to Al-Sharbati et al. (2012), most worked with adolescents and adults. Most practitioners intervened for both male and female clients. The minority reported working with a client who died by suicide. In terms of life experiences among the practitioners, natural disasters or calamities were the topmost personally experienced. For traumatic exposure

due to work, topmost were cases with sexual assault and other very stressful events. Please see Supplementary Table 1 below for the comprehensive description of respondents.

Instrument

This study used a socio-demographics form to clearly describe the participants. The Life Events Checklist for DSM-V Standard Version (LEC-5; Weathers et al., 2013) was used as a qualifying mechanism wherein respondents without any job-related experience of traumatic events did not proceed in answering the instruments such as: Secondary Traumatic Stress Scale (STSS; Bride et al., 2004) for measuring the secondary traumatic stress, Patient Health Questionnaire Anxiety and Depression Scale (PHQ-ADS; Kroenke et al., 2016) for measuring internalizing symptoms (i.e., composite measure of depression and anxiety symptoms), and the 10-item Ruminative Response Scale (RRS-10; Treynor et al., 2003) for measuring the reflection and brooding components of rumination. For each instrument, the responses were summed to get the total scores. Higher scores indicate higher frequency of secondary traumatic stress, internalizing symptoms, and rumination. In this study, the internal reliability of the scales was excellent for STSS ($\alpha = 0.91$) and PHQ-ADS ($\alpha = 0.95$), while good for the RRS-10 Reflection ($\alpha = 0.83$), and RRS-10 Brooding ($\alpha = 0.84$).

Procedure

The data gathering phase started after the issuance of ethics review clearance from the Polytechnic University of the Philippines Graduate School (PUPGS). Letters to recruit participants were sent via email to PASWI for social workers, PGCA for guidance counselors, PAP for psychometricians and psychologists, and other similar organizations. PASWI, PGCA, PAP PPPubServ SIG, and others responded favorably to the request. After the data gathering, 150 randomly selected participants won e-money via e-lottery. The data cleaning of the responses was performed before the statistical analysis to ensure reliable results.

Data Analysis

The Jamovi version 2.3.28 (Jamovi Project, 2022; R Core Team, 2021; Sahin & Aybeck, 2019) was used to run assumption checks and analyze the data. Skewness was used to examine the normality of data, with values beyond +2 or -2 indicate substantial non-normality, while the variance inflator factor (VIF) was used to test the collinearity assumption, with values greater than 5 indicate the covariates with critical collinearity (Hair et al., 2022). Cook's distance was used to detect outliers, with a value greater than 1 suggests its presence, while the Durbin–Watson (DW) Test for Autocorrelation was used to test the autocorrelation assumption wherein a DW statistic close to 2 supports evidence for the absence of autocorrelation (Field, 2009). Harrison-McCabe was used to test the presence of heteroscedasticity with models using multiple linear regressions (Onifade & Olanrewaju, 2020) because the sample is nearest to 200; a Harrison-McCabe statistic near 0.50 supports evidence for homoscedasticity (Hothorn et al., 2009).

The Pearson Product Moment Correlation yielded the correlation coefficients among the independent, mediating, and dependent variables. Using the jAmm GLM mediation model feature, the betas (B) were completely standardized effect sizes and standard (Delta method) was used to compute the confidence intervals (95% CI) in testing the total effects and indirect effects when the mediators (reflection and brooding) were concurrently entered. To test if the indirect effects of the multiple mediator model were significant, the guidance of Preacher and Hayes (2008) for multiple mediators was followed: using the bias-corrected (BC) bootstrap with 5,000 resamples, a 95% confidence interval without a value of zero indicates the indirect effect is significant. The guidance presented by Frazier et al. (2004) was used in interpreting the results of the mediation analysis. The percentage mediation for indirect effects was calculated via the mediation feature in Jamovi Advanced Mediation Models (jAMM).

Ethical Considerations

The PUPGS Research and Extension Office approved the conduct of the study (GSREC 2023-038). The respective organizations of participants approved the recruitment. The online survey form was designed to gather electronic informed consent before the answering the instruments; it has a mechanism to end the survey for disqualified respondents to refrain from getting information which were beyond the scope of the study. The respondents were assured of (a) protection of their identity and confidentiality of responses, (b) freedom to withdraw participation, (c) incentives in participating, (d) that the study is without deception and intended harm, and (e) platforms to contact the primary author.

Results and Discussion

Levels of the Study Variables

Table 2 shows participants' levels of secondary traumatic stress, rumination components, and internalizing symptoms. The practitioners' mild secondary traumatic stress indicates manageable experience of mirrored post-traumatic stress symptoms. The topmost reported symptoms were intrusive thoughts about working with clients (intrusion symptom), emotional numbness (avoidance symptom) and sleeping difficulties (arousal symptom) which suggests dysregulation in thoughts, emotions, and sleep-wake functions.

Table 2. *Descriptive Statistics of Study Variables*

Variable	*Mean*	*Standard Deviation*	*Interpretation*
1. Secondary traumatic stress	36.40	10.60	Mild level
2. Reflection	11.00	3.54	Mild level
3. Brooding	10.20	3.48	Mild level
4. Internalizing symptoms	12.00	9.98	Mild level

Legend: For interpreting the scores of secondary traumatic stress (Severe = 71.4 - 85.00, High = 57.8 - 71.39, Moderate = 44.2 - 57.79, Mild = 30.60 - 44.19, and Minimal = 17 - 30.59), reflection and brooding (High = 16.25 – 20, Moderate = 12.5 - 16.24, Mild = 8.75 - 12.49, Minimal = 5 - 8.74), and internalizing symptoms (High = 36 – 48, Moderate = 24 - 35.99, Mild = 12 - 23.99, Minimal = 0 - 11.99)

Personal, environmental, socioeconomic, and workload factors contributed to the high reports of these secondary traumatic stress symptoms. First, when practitioners were sleep deprived because of sleeping difficulties, it may contribute to their struggles of inhibiting intrusive thoughts about work and regulating emotions (Harrington & Cairney, 2021). Also, their experience of natural disasters may have contributed as surviving natural disasters comes with sleeping difficulties (Labarda & Chan, 2018) and costly damages (Jha et al., 2018). Given that Philippines is a low to middle income country, locals (and practitioners) often experience pervasive socio-economic and environmental stressors resulting to life -long mental health vulnerabilities and outcomes (Allen et al., 2014) and in extreme cases, death by suicide (WHO, 2019). Also, the participants manage approximately 24 cases which is a considered risk as Quinn et al. (2018) observed 23 caseloads in increased secondary traumatic stress. The practitioners' delivery of mental health services comes with secondary traumatic stress due to the severity of their client's distress or trauma (Rumsey et al., 2020) as perpetuated by the said risk factors.

The practitioners' mild reflection and brooding levels indicate manageable ruminative thinking tendencies. The topmost reported reflection tendency was their intentional isolation to reflect on feelings, while for brooding is their wishful thoughts of better outcomes on recent situations. The practitioners' mild internalizing symptoms indicates manageable depression and anxiety symptoms. The tolerable level of internalizing symptoms suggests a lower risk to suicide-related behaviors (Wiebenga et al., 2021) and outcomes such as death (Kim et al., 2021). The report of being tired or having lessened energy (depression symptom) was the most experienced which was also observed in practitioners with secondary traumatic stress and rumination (Søvold et al., 2021; Gossmann et al., 2023). Also, being tired may be an outcome of their sleeping difficulties (Chattu et al., 2018). Meanwhile, having suicidal and self-harming ideations (depression symptom) was the least reported which is credited to the cultural beliefs of Filipinos on suicide being a taboo and a sign of personal weakness (Carlson et al., 2023). Despite being the least reported, the concern should not be disregarded as working in the mental health field have mortality risks by suicide (Kleespies et al., 2011; Stack, 2004; Li et al., 2022), yet suicide and self-harming behaviors of mental health practitioners remains unexplored in the Philippines.

Correlation of the Study Variables

Table 3 shows that all variables were significantly associated with each other. Secondary traumatic stress was positively correlated with reflection at a moderate degree ($r = 0.40$, $p < .001$), with brooding at a high degree ($r = 0.54$, $p < .001$), and with internalizing symptoms at high degree ($r = 0.77$, $p < .001$). With these correlations, it is inferred that their tendencies on intentional isolation to reflect on feelings is a self-care approach that comes with their experience of emotional numbness (Posluns & Gall, 2019). The findings also suggest that practitioners may brood on their clients' situation and hopes for betterment (Smith et al., 2007) as the former have intrusive thoughts about working with the latter.

Table 3. *Correlation of Study Variables*

Variable	*1*	*2*	*3*	*4*
1. Secondary traumatic stress	—			
2. Reflection	0.40**	—		
3. Brooding	0.54**	0.57**	—	
4. Internalizing symptoms	0.77**	0.45**	0.64**	—

***p <.001*

Internalizing symptoms were positively correlated with reflection at a moderate degree ($r = 0.45$, $p < .001$) and with brooding at a high degree ($r = 0.64$, $p < .001$). Reflection and brooding were positively and highly associated with each other ($r = 0.57$, $p < .001$). These correlation coefficients signify statistically significant and positive relationships among each other, indicating that as one variable increase so do the other variables, and vice versa. Altogether, the correlation results were supported by Jin et al. (2020) for the association of secondary traumatic stress with internalizing symptoms (path c or the exposure-outcome), Turliuc et al. (2015) for the associations of secondary traumatic stress with rumination components (path a or the exposure-mediators), however Turliuc et al. showed the association of the intrusion domain (secondary traumatic stress) with the composite rumination. Support for the respective associations of reflection and brooding to internalizing symptoms (path b or the mediators-outcome) were found in the studies of Burwell and Shirk (2007), Schoofs et al. (2010), Raes (2010), and Kokonyei et al. (2016). The significant correlations for each path indicated that the mediation analysis can be pursued (Frazier et al., 2004).

Brooding Mediates the Association of Secondary Traumatic Stress with Internalizing Symptoms

Assumption checks were done prior to the mediation analysis. Sufficient evidence was found for normality (Skewness = 0.36 to 1.02 < 2.00, acceptable), absence of outliers (Cook's distance M = 0.01 < 1.00), absence of collinearity (VIF = 1.43 to 1.78 < 5.00), absence of autocorrelation (DW Statistic = 2.13, p = 0.34), and homoscedasticity (Harrison-McCabe Statistic = 0.42 near to 0.50, p = 0.053).

Table 3 shows the complete results of the mediation analysis. Reflection and brooding were concurrently entered as mediators in the association of secondary traumatic stress with internalizing symptoms. The betas (B) were completely standardized effect sizes and standard (Delta method) was used to compute the confidence intervals (95% CI). The total effect (B = 0.72, 95% CI = 0.64, 0.81, p <.001) decreased (B = 0.56, 95% CI = 0.47, 0.65, p <.001) when reflection (B = 0.02, 95% CI = - 0.02, 0.05, p >.05) and brooding indirect effects (B = 0.15, 95% CI = 0.08, 0.21, p <.001) were entered at the same time.

Table 3. *Brooding Mediates the Association of Secondary Traumatic Stress with Internalizing Symptoms*

Type	*Effect*	*B*	*SE B*	*95% CI*	*β*	*z*	*p*
Indirect	STS → Reflection → IS	0.02	0.02	-0.02, 0.05	0.02	0.78	0.44
	STS → Brooding→ IS	0.15	0.03	0.08, 0.21	0.16**	4.51	< .001
Component	STS → Reflection	0.13	0.02	0.09, 0.18	0.40**	6.07	< .001
	Reflection → IS	0.11	0.15	-0.17, 0.40	0.04	0.78	0.43
	STS → Brooding	0.18	0.02	0.14, 0.21	0.53**	8.77	< .001
	Brooding→ IS	0.85	0.16	0.53, 1.16	0.30**	5.26	< .001
Direct	STS → IS	0.56	0.05	0.47, 0.65	0.59**	11.79	< .001
Total	STS → IS	0.72	0.04	0.64, 0.81	0.77**	16.51	< .001

Testing the indirect and total effects via Standard (Delta) method with 1,000 resamples
STS = secondary traumatic stress, and IS = internalizing symptoms

In testing the significance of the indirect effects, the BC bootstrap (5,000 resamples set with 95% CI) showed that brooding (B = 0.15, 95% CI = 0.08, 0.25, z = 3.55, p <.001) has a significant indirect effect as indicated by its CI without a value of zero, but not for the reflection indirect effect (B = 0.02, 95% CI = - 0.02, 0.06, z = 0.72, p = 0.47). See Table 4 for details.

Table 4. *Testing the significance of indirect effects*

Indirect Effect	*B*	*SE B*	*95% CI*	*β*	*z*	*p*
STS→ Reflection → IS	0.02	0.02	-0.02, 0.06	0.02	0.72	0.50
STS→ Brooding→ IS	0.15	0.04	0.08, 0.25	0.16	3.55	< .001

Testing the significance of indirect effect via bias-corrected (BC) bootstrapping with 5,000 resamples
STS = secondary traumatic stress, and IS = internalizing symptoms

Concurrently entering the rumination components as mediators showed that brooding, and not reflection, has a significant indirect effect in the association of secondary traumatic stress with internalizing symptoms. This suggests that during ruminative thinking, only brooding tendencies or dwelling on problems and perceived incompetence contributes to the experience depression and anxiety symptoms among the practitioners when they mirror the trauma symptoms of their clients. The practitioners' mirrored trauma symptoms enable simultaneous reflection and brooding during ruminative thinking; however, only brooding facilitates depression and anxiety symptoms. Although previously reported that reflection was significantly associated with internalizing symptoms, reflection does not significantly lead to internalizing symptoms when it happens with brooding at the same time. This suggests that during ruminative thinking, reflecting or intentionally contemplating on solving problems to ease depressive symptoms, as induced by secondary traumatic stress, neither predict nor explain internalizing symptoms development. In application, managing brooding tendencies may help prevent depression and anxiety symptoms among practitioners, which supports that brooding is the maladaptive component of rumination. However, the proposed adaptive nature of reflection was neither confirmed nor disconfirmed because the results showed its non-significant indirect effect in the association of secondary traumatic stress with internalizing symptoms. Nonetheless, the findings were parallel with the studies of Burwell and Shirk (2007), Raes (2010), and Kokonyei et al. (2016) wherein brooding, and not reflection, mediated associations resulting in internalizing symptoms. Altogether, brooding, and not reflection, is a partial significant mediator between secondary traumatic stress and internalizing symptoms. The percent mediation for the brooding indirect effect is 22.00%. Figure 1 shows the multiple mediator model of rumination.

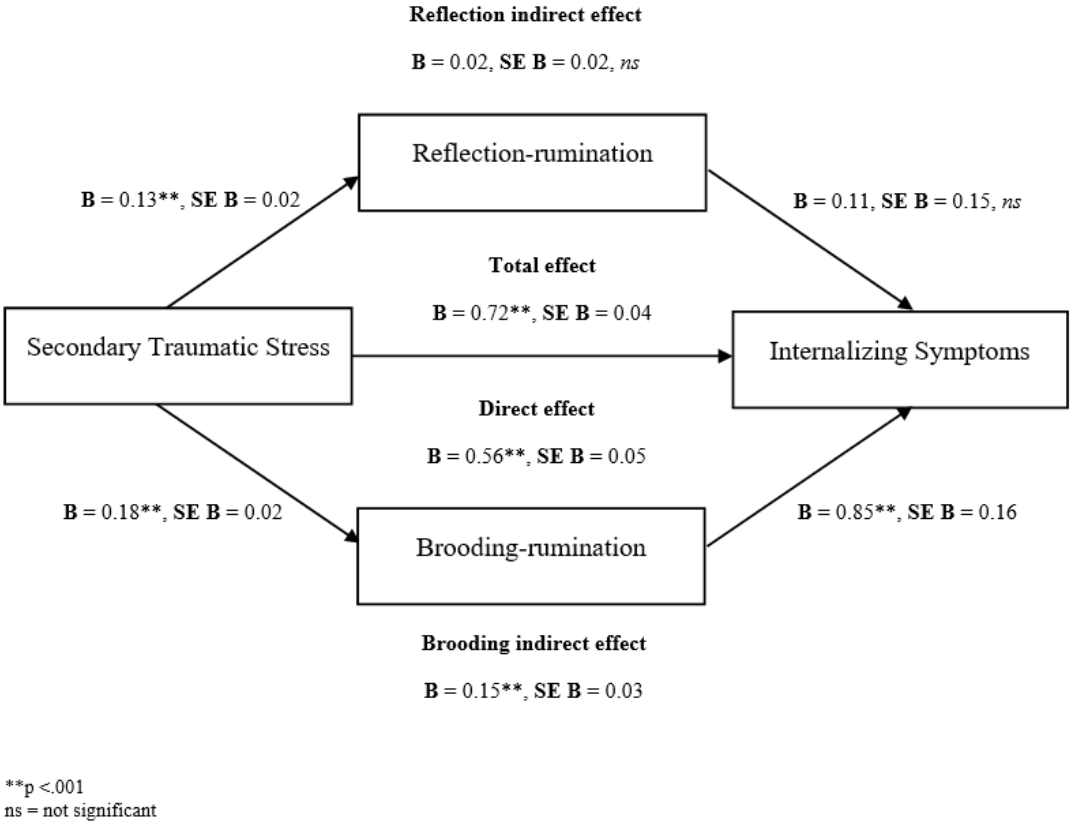

Figure 1. *Brooding Mediates the Association of Secondary Traumatic Stress with Internalizing Symptoms*

Conclusions

Theoretical Implications: Harmonization of Models Based on the Study Findings

To the best of knowledge, this study is the first to examine how rumination contributes to the development of internalizing symptoms among psychosocial mental health practitioners in the Philippines (i.e., psychologists, psychometricians, social workers, and guidance counselors). The results expanded and confirmed the validity of the transdiagnostic model of rumination and empathy-based stress process (Nolen-Hoeksema & Watkins, 2011; Rauvola et al., 2019) among Filipino mental health practitioners. Secondary traumatic stress (Sprang et al., 2018) was a valid empathy-based strain, distal risk factor, and independent form of stressor in mental health services delivery. Internalizing symptoms were valid adverse occupational health and well-being outcome among this sample. Brooding, and not reflection, is a valid proximal risk factor in psychopathology development, and a link between empathy-based strains to harmful occupational health and well-being outcomes. This study confirmed the maladaptive nature of brooding (Treynor et al., 2003); however, the suggested adaptive nature of reflection (Luca, 2019) was neither confirmed nor disconfirmed as it is not a significant predictor nor a mediator. It is argued that reflection, when concurrently occurs with brooding during ruminative thinking, is more neutral than adaptive, and depending on the contents of reflective thinking determines its nature and well-being outcomes (e.g., Vahle-Hinz et al., 2017; Kim & Kang, 2022).

Findings support the notion that mental health practitioners have proximal intrapersonal vulnerabilities to mental health conditions like the people they intervene for. Hence, it is relevant to examine if brooding will link empathy-based strains to other outcomes such as substance use, eating disorders, and somatic symptoms (see Devynck et al., 2019; Smith et al., 2018; Kocsel et al., 2022) which may impact the practitioners' quality of life as seen in recreational activities, eating habits, and general state of health. Also, it is important to further test the adaptive nature of reflection through exploring factors that may boost its favorable effects. For instance, increasing positive emotions (i.e., broaden-and-build theory; Fredrickson, 2001, 2004) may be considered to respectively strengthen and weaken the impact of reflection and brooding in mental health outcomes. While rumination restricts attention to negative self-description and impairs problem solving capabilities (Kaiser et al., 2018; Watkins & Roberts, 2020), increasing positive emotions may interact with reflection and brooding to broaden the scope of attention, improve cognitive flexibility, and promote problem solving (Fredrickson & Branigan, 2005; Nath et al., 2021; Luca, 2019) during ruminative thinking. Similar with Raes (2010), this study offers self-compassion as a hypothesized moderator because it fosters kind ways to emotionally react, cognitively respond, and appreciate personal challenges and sufferings (Neff, 2023; Ge et al., 2019). Further supports were found as self-compassion was associated with rumination and

depressive symptoms among adults (Hodgetts et al., 2020), moderated the association of stress with internalizing symptoms among adolescents (Lathren et al., 2019), and buffered the associations of work-related rumination to depressive symptoms (Wu et al., 2023). Future researchers are encouraged to study rumination through its reflection and brooding components to show their distinct functions in well-being development and outcomes.

Lastly, confirming the validity of the antecedents of empathy-based strains in the empathy-based stress process (e.g., aspects of empathy; Raine et al., 2022) was not within the scope of the study. For this sample, it could be explored how contextual (e.g., normative display of empathy; Blume-Marcovici et al., 2015; collectivistic and masculine orientation; Acuña & Rodriguez, 1995) and individual factors (e.g., coping strategies; Rilveria, 2018) interact with secondary traumatic exposure and empathic engagements to form secondary traumatic stress. Considering this may offer explanation on the mild symptom and tendency presentation of practitioners' secondary traumatic stress, internalizing symptoms, and rumination. The description of respondents (e.g., workload indicators, personal traumatic experiences, and type of secondary traumatic exposure) in Supplementary Table 1 may be considered as antecedents of secondary traumatic stress among this sample. In conclusion, this study highlights the importance of exploring moderators and mediators in the psychopathology development among practitioners for the prevention of occupational hazards while working in the mental health field. Further review of the literature may be needed to hypothesize appropriate associations in the prevention of psychopathology, and promotion of wellness among mental health practitioners.

Methodological Limitations

The results do not indicate brooding as a cause for developing internalizing symptoms when secondary traumatic stress pre-exists. The mediation analysis only confirmed the linear connections of secondary traumatic stress to brooding ending in internalizing symptoms. Following the theoretical underpinning, the mediation model excluded personal trauma exposure (e.g., Rayner et al., 2020) and work-related rumination (e.g., Vandevala et al., 2017) in the analysis. Also, the effects of possible confounding variables were not examined in this study. Interested researchers may consider designing a causal mediation analysis which may include the effects of confounding variables across the mediation paths. A directed acyclic graph presenting the theoretical model with the exposure-mediator-outcome and confounding variables may be used instead of the usual conceptual framework limited to the traditional paths of mediation models (Rijnhart et al., 2021). Also, it may be considered to use experimental or longitudinal studies to establish causation among variables (see Frazier et al., 2004, p. 127).

Using online surveys posed methodological limitations such as the limited contextual information about the participants and respondent bias (Andrade, 2020). Hence, to clearly describe the participants, they were recruited from their Accredited Integrated Professional Organizations (AIPO) and other relevant organizations, while the sociodemographic form supplied their characteristics. To address respondent bias, a two-phased participant screening was used: (1) the informed consent required confirming to meet qualifications, and (2) checking their confirmation's consistency with responses in traumatic exposure (due to work), duration of practice in mental health services, and professions obtained. The respondent attraction rate is 60.73% in proportion to the recommended sample size of 382, but only 52.09% confirmed their qualification in the informed consent. However, inconsistent responses among the seven respondents in the screening process led to the exclusion of their data in the analysis, hence ending with a qualified participant rate of 50.26%. The recommended sample size of 382 was not reached, and this limitation was attributed to the theory-based qualifications with a two-phased screening process and the use of the general registry of psychosocial mental health professionals for the population size (Professional Regulation Commission, 2022). To mention, the statistics of psychosocial practitioners were underreported in the human resources for mental health (i.e., without psychometricians, guidance counselors, and generalist social workers; see WHO & DOH, 2020). Nonetheless, the participants were clearly described which boosted the reliability of results. Also, the response rate of 50.26% was higher than what is usual for educational-related online surveys (i.e., 44.10%; Wu et al., 2022). This trend was attributed to the e-money incentives via lottery, personal and proxy invitations to participate, gentle reminders to complete the survey, answering inquiries through instant messaging apps, and appreciating participants and volunteers who shared the online survey with their colleagues and acquaintances.

Despite these limitations, may the results shift the lens on promoting the quality of life of psychosocial mental health practitioners. The culture of caring should both benefit the clients and practitioners. Hence, the involvement of various environmental systems of mental health practitioners such as the national-systemic level (e.g., Søvold et al., 2021), work-organizational level (e.g., Price et al., 2013), and personal level (e.g., Posluns & Gall, 2019) were encouraged for this advocacy. Exploring other transdiagnostic factors and establishing significant protective factors in mental health conditions for this group may be further pursued.

Ways Forward to Stakeholders

National-systemic Level

The Philippine legislators may refer to the data in creating laws to promote the quality of life of the psychosocial mental health practitioners. In the revision of RA. No. 7305 of 1992 or the "Magna Carta of Public Health Workers", they may explicitly include the mental health practitioners such as psychologists, psychometricians, social workers, and guidance counselors as allied health professionals in the definition of health workers for specificity. To be more inclusive, it may be considered to create new House Bills instead such as "Magna Carta for Mental Health Professionals and Workers" for the benefit of both public and private psychosocial

mental health practitioners. Also, the DOH may consider integrating wellness programs for mental health practitioners (i.e., caring for the caregivers or healing the healer or helping the helper) in national mental health implementation plans.

In consideration of the advanced educational qualification standard for psychologists and guidance counselors in the public service (i.e., master's degree level; see CSC MC No. 14, s. 2019 and MC No. 2, s. 2017, respectively), the results support the justification to increase their salary grades (which recently happened for psychologists; see DBM BC No. 2024-5) as a protective factor against the development of secondary traumatic stress and other adverse occupational outcomes (see Quinn et al., 2018). Also, most of participants were psychometricians, which showed their involvement in mental health services delivery. The State needs to officially recognize psychometricians as mental health professionals, as opposed to their exclusion in the enumerated mental health professionals in the implementing rules and regulations of the Philippine Mental Health Act (see DOH, 2019). Their official recognition is necessary in national strategic planning and accurate workforce statistics for mental health services, as well as for the appropriate justification in creating psychometrician plantilla positions (see CSC MC No. 14, s. 2019, p. 2, 3rd paragraph). These recommendations aim to address systemic factors that may contribute to adverse occupational health and well-being outcomes, as well as negative work affect, cognitions, and behaviors among the practitioners. It must be considered that quality and competent mental health services delivery to Filipinos comes from the recognized, well-cared, and healthy mental health practitioners.

Work-organizational Level

Workplaces may consider reviewing their workload indicators (i.e., caseloads, working hours, working days, tasks, etc.; see WHO, 2023) to mitigate environmental factors in secondary traumatic stress. Calamity leaves, as well as psychosocial and financial support, may be sustained or provided to practitioners who experienced disasters. Wellness programs addressing sleeping difficulties such as opportunities for respite care services, nature trips, mental health leaves, free psychiatric and/or psychological consult, among others may be considered.

The AIPO may consider conducting studies to improve the quality of life of their members through initiating a local study about self-harming, suicide-related behaviors, and mortality due to suicide among the practitioners. Related studies on this subject were only about their western counterparts so a cross-cultural validation is necessary.

Personal Level

Mental health practitioners may practice mindful disengagement from brooding on work-related matters especially during their rest days. Practitioners may keep in mind that clients were also responsible for their therapeutic progress and life in general, and the role of the practitioner is to support them in gaining autonomy, competence, and relatedness which were needed for optimum health and wellness (Ryan & Deci, 2017). Self-care practices may be routinely done as a preventive mechanism. Posluns and Gall (2019) relayed the following principles of self-care for practitioners: (a) awareness of responsibilities, limitations, and even occupational risks, as well as the need to practice self-reflection; (b) balance in attention and involvements with work and life outside of work; (c) flexibility or regulation of emotions, thoughts, and actions in the face of professional challenges and frustrations, as well as incorporation of various coping strategies; (d) healthy lifestyle choices; (e) social support through personal resources (e.g., family, friends, significant other, and personal therapy), as well as professional environment (e.g., mentors, clinical supervisors, peers, and others); and (f) spirituality through mindfulness, prayers, and forest bathing.

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Affiliations and Corresponding Information

Jireh Joy B. Albania, MP
jjbalbania@iskolarngbayan.pup.edu.ph
Polytechnic University of the Philippines – Philippines

John Mark S. Distor, PhD
jmsdistor@pup.edu.ph
Polytechnic University of the Philippines – Philippines