Stress and Workplace Bullying: The Mediating Roles of Anger, Anxiety and Depression

Zhenyu Zhao*

Psychology,LSA,university of Michigan, ann arbor, 48104 ,US

*Corresponding author. Email:zhao_zhenyu@umich.edu

Abstract. This paper aims to examine the effect of general strains on workplace bullying. Drawing on the general strain theory, we propose and test the relationship between strain and workplace bullying by exploring the mediating role of negative emotion. Through collecting data via online questionnaires, we received 209 responses. The results show a positive relationship between personal strain and workplace bullying behaviors; that is, stress contributes to workplace bullying. In addition, the relationship is mediated by typical negative emotions—i.e., anxiety and depression.

Keywords: General strain theory, stress, workplace bullying, anxiety, depression, anger.

1 Introduction

Bullying is an aggressive behavior characterized by intentionally and repeatedly causing harm and discomfort to another person [1]. Reducing workplace bullying is always important for the enterprises and organizations, specifically, bullying not only leads to serious psychological effects such as depression, anxiety, insomnia, higher suicide rates, and lower self-esteem [2-4], but also correlates with criteria like employee job performance, satisfaction, retention, and absenteeism [23]. Given these negative consequences, understanding the predictors of workplace bullying has become an important focus of research, with the goal of developing effective interventions.

Among the theories used to explain bullying, Agnew's General Strain Theory (GST) provides a particularly useful framework for understanding how stressors lead to negative emotional reactions, which in turn may result in deviant behaviors such as bullying. GST holds that stress can arise from three primary sources: (1) goal blockage, which occurs when individuals are unable to achieve their aspirations (e.g., failing to attain financial success); (2) the presentation of noxious or negatively valued stimuli, such as harassment or poor interpersonal relationships; and (3) the loss of positively valued stimuli, such as the theft of property or the loss of personal relationships [5-6]. According to GST, these stressors lead to negative emotions like

P. Dou and K. Zhang (eds.), *Proceedings of the 2024 2nd International Conference on Economic Management, Financial Innovation and Public Service (EMFIPS 2024)*, Advances in Economics, Business and Management Research 327,
https://doi.org/10.2991/978-94-6463-706-9_66

anger, anxiety, and depression, which may prompt individuals to engage in antisocial behaviors to relieve their stress or eliminate its source [5].

Bullying, as a form of antisocial behavior, fits within the GST framework because it violates social norms of mutual respect and causes harm to victims. It is reasonable to assume that individuals experiencing significant stress might resort to bullying to alleviate their negative emotions. For example, a manager experiencing stress due to a lack of control at work might overexert authority by micromanaging or dominating subordinates. Similarly, an employee overwhelmed by work pressure might ostracize colleagues as a way to cope with their frustrations.

GST posits that stress does not directly lead to deviant behaviors; rather, it is the negative emotions generated by stress that mediate this relationship. One prominent emotion in GST is anger, which has been shown to play a key role in triggering violent and antisocial behaviors [7]. Previous studies have shown that anger plays an extremely important role in general stress theory because anger is the emotion most likely to trigger violent and criminal behavior, and it reduces people's tolerance for harm or insult, reduces inhibitions, motivates individuals to take action, and creates a desire for revenge and revenge [7]. Another reason anger can lead to bullying is that it is also strongly associated with "aggressive" traits; people with this trait often become easily irritated and have a lower tolerance for frustration. Furthermore, general stress theory also suggests that individuals with aggressive characteristics are more likely to react to adverse situations with anger and other bad emotions, which can cause them to be unable to manage relationships around them and are more likely to experience social rejection. This will eventually make it difficult to maintain stable relationships, be employed, and be more likely to end up in low-quality marriages and jobs, adding more potential stressors and further increasing the likelihood of being antisocial [22].

In addition to anger, other negative emotions, such as depression and anxiety, may also be mediating variables leading to bullying. People with depression and anxiety tend to have a significant negative impact on their lives, including reduced interest in academic and professional activities, unreasoned sadness, and difficulty in performing basic daily activities[8]. In this case, people with depression and anxiety are likely to feel that they have lost control of their lives and try to regain some sense of power by bullying others. Besides that, people with depression and anxiety are also more likely to experience mood swings and extreme emotions, which can also cause them to behave inappropriately when interacting with others, including aggressive and bullying behavior (Depression - National Institute of Mental Health [14].

Despite the widespread application of GST to deviant behaviors among teenagers, few studies have examined adult bullying in the workplace. Given the GST's important role in explaining antisocial behavior, it is critical to explore how GST can apply to workplace bullying, specifically by examining how emotions like anger, anxiety, and depression mediate the relationship between stress and bullying[10].

This study aims to investigate the mediating roles of negative emotions—anger, anxiety, and depression—in the relationship between stress and workplace bullying. By applying GST to the workplace context, this research seeks to provide new insights into the emotional mechanisms that contribute to bullying behaviors. Based on GST and the existing literature, we propose the following hypotheses:

Hypothesis 1a (H1a): Stress will be positively associated with increased anger.

Hypothesis 1b (H1b): Stress will be positively associated with increased anxiety.

Hypothesis 1c (H1c): Stress will be positively associated with increased depression.

Hypothesis 2a (H2a): Anger will significantly indirectly affect the relationship between stress and bullying behavior, but its effect will be weaker than other emotions.

Hypothesis 2b (H2b): Anxiety will significantly indirectly affect the relationship between stress and bullying behavior.

Hypothesis 2c (H2c): Depression will significantly indirectly affect the relationship between stress and bullying behavior.

Hypothesis 3a (H3a): The direct effect of stress on bullying behavior will be non-significant after accounting for the mediating roles of anger, anxiety, and depression.

Hypothesis 3b (H3b): The total indirect effect of stress on bullying behavior through anger, anxiety, and depression will be significant, with anxiety and depression being the strongest mediators.

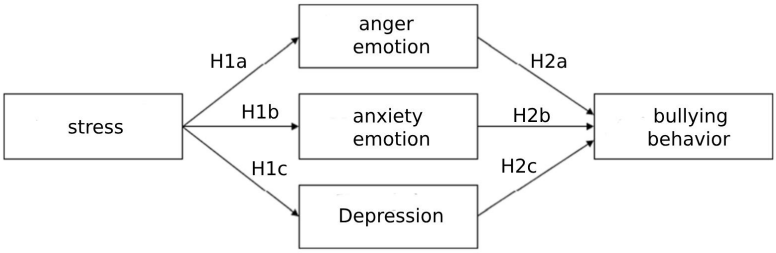

Fig. 1. The hypothesized model

2 Method

2.1 Design and Participants

This study employed a convenient sampling method to collect data through an online survey hosted on the Wenjuanxing platform (https://www.wjx.cn/). Participants were first presented with an informed consent form, and upon agreeing, they proceeded to complete a series of scales assessing negative emotions (anger, anxiety and depression) scale, stress scale, bullying behavior scale and demographic variables. After completing the questionnaire, participants were compensated with $ 1.5 for their time.

A total of 209 participants from China completed the survey, comprising 84 males and 123 females. The majority of the sample (62.2%) were aged between 31 and 40, followed by 22.01% who were between 26 and 30 years old. Regarding educational background, 78.95% of the samples had bachelor's degrees. This was followed by graduate and college degrees, accounting for 11% and 8.61% of the sample. The sample also has a large distribution in terms of occupation types, among which the

largest occupation type in the sample is “technology development”, accounting for 19.62% of the sample, followed by “enterprise managers” (11%), “operations” (11%), “administration” (10.05%), “finance” (9.57%), and “business” (8.61%) (Table 1).

Table 1. The demographic distribution of the sample.

Demographic Variables	**Year: 2024**		
	N	**Percent%**	**Cumulative%**
Gender			
Male	85	40.67	40.67
Female	123	58.85	99.52
other	1	0.48	100.00
Age Group			
18-25	6	2.87	2.87
26-30	46	22.01	24.88
31-40	130	62.20	87.08
41-50	18	8.61	95.69
51-60	9	4.31	100.00
Highest education			
High school	3	1.44	1.44
Dazhuan (Junior college)	18	8.61	10.05
Undergraduate	165	78.95	89.00
Graduate and upper	23	11.00	100.00
Current occupation			
Marketing/sales/business	18	8.61	8.61
Purchasing	6	2.87	11.48
Administrative	21	10.05	21.53
Human resource	11	5.26	26.79
Product/operations	23	11.00	37.79
Self-employed person	4	1.91	39.70
Finance/accounting /auditing	20	9.57	49.27
Enterprise manager	23	11.00	60.27

Design	10	4.78	65.05
Service industry	5	2.39	67.44
Technical Development/Engineer	41	19.62	87.06
Agriculture/forestry/husbandry/fishing	2	0.96	88.02
Worker	6	2.87	90.86
Freelance work	5	2.39	93.28
Teacher	2	0.96	94.24
Medical	3	1.44	95.86
Researcher	2	0.96	96.64
Government	7	3.35	100.00
Total	209	100.00	100.00

2.2 Psychological Assessments

Anger The Dimensions of Anger Reactions (DAR-5) scale compiled by Forbes et al. was adopted, the scale including 5 items and using 5 points scoring, higher score indicates higher level of anger. For example, one item asks: "I found myself getting angry at people or situations" (1=None or almost none of the time, 5= All or almost all of the time). In this study, the internal consistency coefficient of this scale was α = .844 [17].

Anxiety The Hamilton Anxiety Rating Scale (HAM-A) compiled by Hamilton et al. (1959) was adopted, including 14 items and uses 5 points scoring, higher the score indicates higher level of anxiety. An example item is: "worries, anticipation of the worst, fearful anticipation, irritability" (0= Not present, 4= Very severe). The internal consistency coefficient of this scale was α = .91 [23-24].

Depression The Patient Health Questionnaire (PHQ-9) compiled by Kroenke et al. (1999) was adopted, containing 9 items and use 4 points scoring, higher the score indicates higher level of depression mood. For example: "Little interest or pleasure in doing things" (0= Not at all , 3= Nearly every day). In this study, the internal consistency coefficient of this scale was α = .95 [20].

General stress The General Health Questionnaire (GHQ-12) compiled by David Goldberg and Paul Williams, consisting of 12 items and use 4 points scoring. Higher score indicates the higher level of stress. For example: "Been able to concentrate on what you're doing" (0= Better than usual, 3= Much less than usual). In this study, the internal consistency coefficient of this scale was α = .902 [18].

Bullying behavior Adapt Negative Act Questionnaire (NAQ-R) compiled by David Goldberg and Paul Williams, consisting of 22 items and use 5 points scoring. For example, "withholding Someone's information which affects that person's performance" (0 = Never, 4=Daily). Higher score indicates the higher bullying

frequency. In this study, the internal consistency coefficient of this scale was α = .948 [15].

3 Results

3.1 Descriptive Statistics and Correlations

Descriptive analysis showed statistically significant correlations between bullying behavior and the negative emotions of anger, anxiety, depression, and stress. The standard deviations for anger, anxiety, depression, stress, and bullying behavior were 4.13, 9.48, 4.94, 6.71, and 12.27, respectively. All variables in the study exhibited statistically significant correlations (Table 2).

Table 2. Descriptive statistics.

	Mean	Std. Dev.	(1)	(2)	(3)	(4)
(1) Anger	12.67	4.13				
(2) Anxiety	28.23	9.49	0.56**			
(3)Depression	16.44	4.94	0.56**	0.83**		
(4) Stress	24.10	6.71	0.56**	0.71**	0.73**	
(5)Bullying behavior	33.12	12.27	0.45**	0.72**	0.66**	0.54**

Note: * indicate p<0.05, ** indicate p<0.01, *** indicate p<0.001

3.2 Mediation Analysis

To test the hypotheses, the study employed an SPSS macro program, specifically the model 4 in PROCESS, to estimate the mediation effect. Which generates direct and indirect effect in mediation.

3.2.1.Anger as a Mediator

The regression analysis indicated that stress was significantly associated with anger ($\beta = 0.5665$, $p < 0.001$), explaining 32.09% of the variance ($R^2 = 0.3209$). However, the path from anger to bullying behavior was not significant ($\beta = 0.0409$, $p = 0.5022$). The indirect effect of stress on bullying behavior through anger was not significant (Effect = 0.0232, 95% BootCI [-0.0405, 0.0886]). This support H1a and reject H1b.

3.2.2.Anxiety as a Mediator

The regression analysis indicated that stress was significantly associated with anxiety ($\beta = 0.71$, $p < 0.001$), explaining 50.4% of the variance ($R^2 = 0.5040$). The path from anxiety to bullying behavior was significant ($\beta = 0.5284$, $p = 0.001$). The indirect effect of stress on bullying behavior through anger was significant (Effect = 0.3751, 95% BootCI [0.2151, 0.5416]). This support H2a and H2b.

3.2.3. .Depression as a Mediator

The regression analysis indicated that stress was significantly associated with depression ($\beta = 0.735$, $p < 0.001$), explaining 54.02% of the variance ($R^2 = 0.5040$). The path from depression to bullying behavior was significant ($\beta = 0.1962$, $p = 0.0388$). The indirect effect of stress on bullying behavior through anger was significant (Effect = 0.1442, 95% BootCI [0.122, 0.2907]). This support H3a and H3a.

3.2.4. . Total and Direct Effects

The total indirect effect of stress on bullying behavior through all three mediators was significant (Total Indirect Effect = 0.5425, 95% BootCI [0.3746, 0.7173]), indicating that the combined mediating effects of anger, anxiety, and depression account for a substantial portion of the relationship between stress and bullying behavior. The direct effect of stress on bullying behavior was not significant ($\beta = 0.0069$, $p = 0.9272$, 95% CI [-0.1410, 0.1547]), suggesting that the relationship between stress and bullying is fully mediated by the psychological states of anxiety and depression.

4 Discussion

To explore how stress leads to bullying in the workplace; this study proposes and tests a mediation model, this model examines the relationship between negative emotions caused by stress and workplace bullying through a variety of intervention mechanisms. Our findings indicate that anxiety and depression significantly mediate the relationship between stress and bullying, whereas anger does not. Furthermore, the direct effect of stress on bullying behavior was not significant, suggesting that the psychological pathways of anxiety and depression play critical roles in explaining how stress leads to bullying behavior.

Our results align with previous research that highlights the role of psychological distress in aggressive and bullying behaviors. For instance, prior studies have established that anxiety and depression are common outcomes of chronic stress and that these emotional states can exacerbate aggressive tendencies and eventually lead to bullying behavior [21].

However, the non-significant mediating effect of anger in this study contrasts with some earlier findings that have linked anger to aggression and criminal behavior

[7][9]. The possible explanation for this discrepancy is that the link between stress, emotions, and criminal behavior is complex, and a single negative emotion may not be able to explain all criminal behavior. For example, previous studies have shown that depressive emotions are more likely to lead to non-violent types of crime (such as theft and drunk driving) [12]. However, anger on the other hand has been shown to be highly associated with violent crime but less effective in explaining other types of crime (such as drug offenses and economic crimes) [11-12]. In general, the anger variable in General Strain Theory is less effective in explaining non-violent criminal behavior [19]. Bullying behavior can take many forms, ranging from verbal abuse, social exclusion, to physical violence and cyberbullying [16]. Workplace bullying however may be more inclined to involve minor verbal or social bullying rather than physical violence compare with school bullying [13]. This provide a potential reason for why General Strain Theory can appropriately apply on studies of teenager bullying behavior but is unable to fully explain this adult bullying study.

4.1 Theoretical Implication

Firstly, this study fills a gap of the general strain theory in the field of adults bullying and workplace behavior. While previous research has shown that experiencing strain leads adolescents to engage in more bullying behavior at school, there is less evidence on the utility of general strain theory in the workplace and its impact on adults. This study further expands the application field of general strain theory by testing the influence of experience strain on adults. In addition, this study also tries to explain the mechanism of different emotions in general strain theory. Previous studies have focused on the role of anger in general strain theory, while few studies have studied the role of other negative emotions. This study has deepened our understanding of the role of other emotions such as depression and anxiety. This underscores the importance of targeting these emotional states in anti-bullying interventions, as reducing stress alone may not be enough to prevent bullying without addressing the mediating factors of anxiety and depression.

4.2 Limitations

The study has several limitations. First, the cross-sectional study design used in this study cannot prove a cause-and-effect relationship between strain and bullying. Second, this study involved limited emotions, and the findings suggest a partial mediating effect; future studies could include other negative emotions, such as fear and shame. Third, this study used a self-report approach to measure bullying behavior and emotion, and all the data came from the same group of participants, which could lead to potential same source bias and reduce the validity of the study. Finally, as the sample in this study is only covered 209 employed people in China, further research should focus on larger samples that can expand the generalizability of the findings.

5 Conclusion

The study aimed to explore the relationship between stress and workplace bullying, through the mediating roles of anger, anxiety and depression, using Agnew's GST as guiding framework. The findings show that stress significantly increases anger, anxiety and depression, with anxiety and depression being the strongest mediators of bullying behavior. However, anger was associated with stress, its effect on bullying was weaker, highlighting the complexity of its role. These results suggest that stress dose not directly cause bullying but operates the negative emotional states, particularly anxiety and depression. The study extends the application of GST to workplace bullying, providing empirical support for the idea that stress induce negative emotions are the key driver's antisocial behavior. To mitigate workplace bullying, organization should focus on reducing stressors and supporting employees' mental health.

REFERENCES

1. American Psychological Association. (2023). Bullying. Apa.org. https://www.apa.org/topics/bullying#:~:text=Bullying%20is%20a%20form%20of
2. Lee, Y., Kim, J., & Song, H. (2021). Do negative emotions matter? Paths from victimization to cyber and traditional bullying from a general strain theory perspective. Crime & Delinquency, 67(13-14), 001112872110524. https://doi.org/10.1177/00111287211052439
3. Sampaio, J. M. C., Santos, G. V., Oliveira, W. A. de, Silva, J. L. da, Medeiros, M., & Silva, M. A. I. (2015). Emotions of students involved in cases of bullying. Texto & Contexto - Enfermagem, 24(2), 344–352. https://doi.org/10.1590/0104-07072015003430013
4. Natvig, G. K., Albrektsen, G., & Qvarnstrøm, U. (2001). School-Related stress experience as a risk factor for bullying behavior. Journal of Youth and Adolescence, 30(5), 561–575. https://doi.org/10.1023/a:1010448604838
5. Agnew, R. (2006). Pressured into crime: An overview of general strain theory. Oxford University Press.
6. Brezina, T. (2017). General strain theory. Oxford Research Encyclopedia of Criminology and Criminal Justice. https://doi.org/10.1093/acrefore/9780190264079.013.249
7. Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency (pp. 47–87). S.N.
8. Poonam Punia, Swati Jangra, & Manju Phor. (2024). Unveiling connections between stress, anxiety, depression, and delinquency proneness: Analysing the general strain theory. Open Education Studies, 6(1). https://doi.org/10.1515/edu-2024-0013
9. Joon Jang, S. (2007). Gender differences in strain, negative emotions, and coping behaviors: A general strain theory approach. Justice Quarterly, 24(3), 523–553. https://doi.org/10.1080/07418820701485486
10. Ganem, N. M. (2010). The role of negative emotion in general strain theory. Journal of Contemporary Criminal Justice, 26(2), 167–185. https://doi.org/10.1177/1043986209359558
11. BARON, S. W. (2004). General strain, street youth and crime: A test of agnew's revised theory. Criminology, 42(2), 457–484. https://doi.org/10.1111/j.1745-9125.2004.tb00526.x

12. Capowich, G. E., Mazerolle, P., & Piquero, A. (2001). General strain theory, situational anger, and social networks. Journal of Criminal Justice, 29(5), 445–461. https://doi.org/10.1016/s0047-2352(01)00101-5
13. Cho, S., & Lee, J. M. (2018). Explaining physical, verbal, and social bullying among bullies, victims of bullying, and bully-victims: Assessing the integrated approach between social control and lifestyles-routine activities theories. CHILDREN AND YOUTH SERVICES REVIEW, 91, 372–382. https://doi.org/10.1016/j.childyouth.2018.06.018
14. Depression—National Institute of Mental Health (NIMH). (n.d.). Retrieved October 13, 2024, from https://www.nimh.nih.gov/health/topics/depression
15. Einarsen, S., Hoel, H., & Notelaers, G. (2009). Measuring exposure to bullying and harassment at work: Validity, factor structure and psychometric properties of the Negative Acts Questionnaire-Revised. Work & Stress, 23(1), 24–44. https://doi.org/10.1080/02678370902815673
16. Escartín, J., Rodríguez-Carballeira, A., Zapf, D., Porrúa, C., & Martín-Peña, J. (2009). Perceived severity of various bullying behaviours at work and the relevance of exposure to bullying. Work & Stress, 23(3), 191–205. https://doi.org/10.1080/02678370903289639
17. Forbes, D., Alkemade, N., Mitchell, D., Elhai, J. D., McHugh, T., Bates, G., Novaco, R. W., Bryant, R., & Lewis, V. (2014). Utility of the Dimensions of Anger Reactions–5 (dar-5) Scale as a Brief Anger Measure. Depression and Anxiety, 31(2), 166–173. https://doi.org/10.1002/da.22148
18. Jackson, C. (2006). The General Health Questionnaire. Occupational Medicine, 57(1), 79–79. https://doi.org/10.1093/occmed/kql169
19. Jang, S. J., & Rhodes, J. R. (2012). General strain and non-strain theories: A study of crime in emerging adulthood. Journal of Criminal Justice, 40(3), 176–186. https://doi.org/10.1016/j.jcrimjus.2011.09.003
20. Kroenke, K., Spitzer, R. L., Williams, J. B. W., & Löwe, B. (2010). The Patient Health Questionnaire Somatic, Anxiety, and Depressive Symptom Scales: A systematic review. General Hospital Psychiatry, 32(4), 345–359. https://doi.org/10.1016/j.genhosppsych.2010.03.006
21. Richter-Levin, G., & Xu, L. (2018). How could stress lead to major depressive disorder? IBRO Reports, 4, 38–43. https://doi.org/10.1016/j.ibror.2018.04.001
22. Robert, A. (1997). Stability and Change in Crime over the Life Course: A Strain Theory Explanation. In Developmental Theories of Crime and Delinquency. Routledge.
23. Robert, F. (2018). Impact of Workplace Bullying on Job Performance and Job Stress. Journal of Management Info, 5(3), Article 3. https://doi.org/10.31580/jmi.v5i3.123
24. Shear, M. K., Vander Bilt, J., Rucci, P., Endicott, J., Lydiard, B., Otto, M. W., Pollack, M. H., Chandler, L., Williams, J., Ali, A., & Frank, D. M. (2001). Reliability and validity of a structured interview guide for the Hamilton Anxiety Rating Scale (SIGH-A). Depression and Anxiety, 13(4), 166–178. https://doi.org/10.1002/da.1033