Original Article

Assessing Post Traumatic Stress Disorder (PTSD) and Evaluating Gratitude-Based Coping Strategies for Caregivers of Pediatric Cancer Patients

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Abstract

Objective: The current study focuses on the frequency and severity of post-traumatic stress disorder (PTSD) in caregivers of children with cancer and the relationship between PTSD symptoms and the caregivers' level of gratitude in Pakistan.

Methodology: This Cross-sectional design research was carried out between January 2023 and March 2023 at the Department of Oncology in Shaukat Khanum Memorial Cancer Hospital & Research Centre, Peshawar, Northwest General Hospital & Research Centre, Peshawar in Khyber Pakhtunkhwa (KPK), and Pakistan Institute of Medical Sciences, Quaid-e-Azam International Hospital in Islamabad, Pakistan.The research included 153 individuals who provided care for children with cancer between the ages of 0 and 12. The selection of these subjects was done using purposive convenience sampling. The PTSD Checklist-Civilian Version (PCL-C) was employed to evaluate the presence of PTSD, while gratitude was quantified using the Gratitude Questionnaire-Six-Item Form (GQ-6). The data were examined using the statistical software SPSS V28, utilizing descriptive statistics, independent t-tests, and Pearson's correlation coefficient.

Results: The findings showed that 52.94% of caregivers had high levels of PTSD and that severe PTSD symptoms were more common among female caregivers and caregivers with lower educational attainment. Mostly, caregivers expressed moderate (40.52%) or low (30.71%) levels of gratitude. Higher degrees of gratitude were linked to lower levels of PTSD symptoms, according to a statistically significant negative correlation ($r = -0.433$, $p < 0.001$) between the two variables.

Conclusion: The study emphasizes the possibility of gratitude to shield caregivers of pediatric cancer patients from experiencing or lessening the occurrence and intensity of PTSD symptoms. The results underscore the importance of implementing interventions that focus on the mental well-being of caregivers. Additionally, it is crucial to develop gratitude-based therapies that are specifically tailored for this group in order to enhance their ability to cope with challenges and reduce the overall burden of caregiving.

Keywords: Caregivers, Compassion fatigue, Pediatric oncology, Post-Traumatic stress disorder

Introduction

Post-traumatic stress disorder (PTSD) and Symptoms (PTSS) can result from the extremely upsetting experience of caring for a kid with cancer.[1,2] Parents who are dealing with significant levels of disease-related parental stress may still have these symptoms long after the child's therapy has ended.[3] PTSD is not much more common in children who have had cancer than in the general community; nevertheless.[4] Despite these challenges, many carers describe post-traumatic growth and resilience.[2,4] This implies that focused therapies are required to assist parents in managing the long-term effects of their child's condition.[2]

One major worry is how paediatric cancer affects carers psychologically, especially concerning post-traumatic stress disorder (PTSD).[5,6] To control this stress, carers frequently employ problem-focused, emotion-focused, and avoidant coping mechanisms.[5] In the meantime, it is unknown how well these techniques work to lessen carer load and enhance social integration.[7,8] Emotional management by carers has been shown to guard against psychopathology during paediatric cancer therapy. Furthermore, acceptance and therapeutic humanization depend critically on good communication between patients and healthcare professionals.[9] Positive changes are often brought about by the problem- and emotion-focused coping mechanisms that Chinese parents of children with cancer or haematological diseases utilize.[10]

PTSD is most commonly caused by traumatic events. At 3.9% lifetime frequency in the general population and 5.6% among trauma survivors, PTSD is common. People with PTSD suffer as do their family and society at large.[11] Estimated to be the leading cause of death for children and adolescents worldwide, 300,000 new cases are diagnosed annually.[12] PTSD intrusive symptoms in carers can cause ongoing anxiety and a lack of parental presence; these symptoms can show up as over protectiveness of their children and a failure to identify their symptoms. The degree of trauma exposure and PTSD experienced by carers is associated with more inconsistent and dangerous parenting practices as well as a negative view of the effects and behavior of their children.[11] Because they help with the many demands that arise during treatment, cancer patients frequently depend on family members as carers. Family carers, parents, spouses, siblings, friends, and neighbours offer unpaid, extended in-home care for loved ones. Physical symptoms such as exhaustion, anorexia, indigestion, constipation, severe sleep disorders, and pain are experienced by caregivers of patients who are unable to manage their symptoms. Psychosomatic symptoms such as stress, anxiety, fear, loneliness, marital issues, and lack of hope are also experienced by these caregivers.[13] A mismatch between care demands and resources causes a range of levels of distress known as carer load. The carer quality of life that has been studied the most is psychological discomfort. Carer load is linked to particular traits of the carer. These include lower levels of quality of life, decreased self-efficacy, depression and anxiety disorder, and less use of support services.[13]

One important coping strategy for parents of children with cancer has been found to be gratitude, especially when it comes to family integration, social support, and comprehending the medical circumstances.[14] This is in line with the larger body of research on coping mechanisms, which include avoidant, emotion-focused, and problem-focused techniques.[5] Notwithstanding, it is evident that treating the psychopathology of both the child and the carer depends critically on their emotional control and psychosocial support.[6] Better social adjustment has been linked to children with cancer using primary and secondary control coping mechanisms 8. PTSD and coping mechanisms in cancer patients are related, nevertheless, and this implies that while some coping mechanisms may be helpful, others may not.[15] Therefore, even while thankfulness could be a useful coping strategy, more research is needed to determine how specifically it helps paediatric cancer carers overcome PTSD.

Objectives of the Study

The two primary objectives of the study were:

Objective 1: To assess the frequency and intensity of post-traumatic stress disorder (PTSD) in carers of paediatric cancer patients in KPK and Punjab, Pakistan, by employing the PTSD Checklist-Civilian Version.

Objective 2: To Examine the correlation between carers' levels of gratitude, as assessed by the Gratitude Questionnaire-Six Item Form (GQ-6), and the effects of PTSD while investigating the potential safeguarding influence of Gratitude.

As cancer is a life-long illness, it affects patients and their families and produces physiological and psychological issues. The literature analysis previously cited indicates that PTSD is an urgent problem that parents of children with pediatric cancer often describe. The present literature pays relatively little attention to the levels of post-traumatic stress disorder (PTSD) and the impact of appreciation on the caretakers of children with cancer in Pakistan. Still, a comprehensive assessment is necessary to ascertain this specific area's current state of knowledge.

Methodology

The study used a cross-sectional study design to evaluate the levels of PTSD in carers of paediatric cancer patients, as well as the associated consequences of gratitude in the context of Pakistan.The method of "Purposive Convenience Sampling" was employed. The caregivers of paediatric cancer patients' ages 0 to 12 years were intentionally selected since they are

directly related to the study's primary objective. Although leading cancer hospitals in KPK and Punjab are easily accessible, the purposeful feature of participant selection guarantees that only those who match the requirements for studying the influence of PTSD and gratitude are included.

Data was collected between January 2023 and March 2023 from the Oncology Departments of Quaid-e-Azam International Hospital in Islamabad, Pakistan, Pakistan Institute of Medical Sciences, Northwest General Hospital & Research Centre, Peshawar in Khyber Pakhtunkhwa (KPK), and ShaukatKhanum Memorial Cancer Hospital & Research Centre, Peshawar. Under letter number HITEC-IRB-24-2023, issued on December 1, 2020, the IRB/ERB Committee of HITEC-IMS granted the ethical clearance.

Calculations for determining the appropriate sample size were conducted using the "Raosoft" and "Openapi" web tools to ensure the reliability of the results. The calculations assumed a 95% confidence level, 5% margin of error, and 50% response distribution rate, which yielded 140. To account for probable non-responses and offer a more comprehensive representation of caregivers' experiences in Oncology wards, the study aimed for a larger sample size (n=153) despite the initial guideline of a sample size of 140. Participants gave informed, verbal consent before data collection. Data collectors explained each questionnaire item and recorded the data. The questionnaire asked about the caregivers' relationship to the patient and their age, gender, education level, occupation, and monthly income. Caregiver PTSD was detected using the PTSD Checklist-Civilian Version (PCL-C). A standardized self-report rating scale for PTSD, known as the PTSD Checklist-Civilian Version (PCL-C), consists of 17 questions corresponding to the most significant PTSD symptoms. The finish time is 5-10 minutes. Mild to moderately severe PTSD symptoms are 17 to 29, moderate to fairly high are 30 to 44, and severe are 45 to 85.16 The Gratitude Questionnaire-Six Item Form (GQ-6) was utilized to assess gratitude.[17] The overall score on this questionnaire spans from 6 to 42, and this range can be segmented into several levels to evaluate the extent of one's gratitude disposition. Based on the overall score, the levels of gratitude can be divided into three categories: low gratitude (6–18), moderate gratitude (19–30), and high gratitude (31–42).[18]

The data in (Table 1) indicates that out of a total sample size of 153 people, 63 are male and 90 are female, which makes up 41.17% and 58.82%, respectively. Table 1 presents the sociodemographic and demographic characteristics of the population.

The analysis of the data was done with SPSS version 28. Analyzing the demographic traits was done using the described statistics. Mean values of PTSD assessed the intensity of PTSD symptoms, and study participants were classified as having Low, Moderate, or High PTSD by use of cutoff criteria. Using a cutoff criterion, participants' levels of gratitude were assessed and split into Low, Moderate, or High Gratitude groups. We studied the relationship between PTSD and gratitude using Pearson's Correlation Coefficient.

Results

The statistics mentioned in Table 2 reveal that more than half (52.94%) of the sample overall expressed high PTSD levels; the data indicates a worrisome prevalence of high levels of PTSD among pediatric cancer caregivers. Remarkably, compared to male caregivers, female caregivers were more likely to have high PTSD levels. Another surprising discovery is the inverse association between education level and PTSD severity. Compared to caregivers with a graduate degree, individuals with less education (illiterate and matric) were more likely to have significant levels of post-traumatic stress disorder. Concerning gratitude levels, most caregivers indicated low (30.71%) or moderate (40.52%) levels, while just 28.75% expressed high levels of gratitude.

Using independent t-tests for gender, age, education, relationship with patients (RWP), post-traumatic stress disorder (PTSD), and spirituality, significant differences were found within the examined population. P-values (<.001) show statistically significant differences in the variables of gender, age, education level, RWP, PTSD scores, and gratitude scores. (See Table 3). Comprehensive data comprehension is made possible by the means and standard deviations, which provide important information about each factor's central tendency and dispersion within the sample.

gratitude, as seen by the moderately negative correlation value of -0.433. According to this study, gratitude may be able to prevent the start or intensity of symptoms associated with post-traumatic stress disorder. According to the study, expressing gratitude has the potential to prevent or reduce the onset or severity of symptoms associated with PTSD. The negative correlation suggests that individuals with higher levels of appreciation are more prone to experiencing fewer symptoms of PTSD.

Discussion

According to earlier studies,[19,20] PTSD is quite common among pediatric cancer caregivers, especially among female caregivers and those with less education. Furthermore, supported by earlier research are the inverse correlations between PTSD severity and education level.[19] The finding that most caregivers report low or moderate levels of gratitude is consistent with the majority of research on the correlation between PTSD severity and gratitude.[20,21] The significant emotional distress experienced by cancer patients' caregivers, they emphasize even more the necessity of treatments to address the mental health issues this group faces.[22]

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Table 1. Demographics of caregivers

Variables	n	Percentage %
Age Range		
18-29	43	28.10 %
30-39	49	32.02 %
40-50	35	22.87 %
≥ 50	26	16.99 %
Gender		
Male	63	41.17 %
Female	90	58.82 %
Education		
Illiterate	33	21.6 %
Matric	75	49.0 %
Graduate	45	29.4 %
Relationship with Patient		
Parents	122	79.7 %
Siblings	6	3.9 %
Uncle or Aunt	25	16.3 %

Table 2. Frequencies of caregivers with levels of PTSD and Gratitude

S.no	Total	n=153	Male (n=63)	Female (n=90)	Illiterate (n=33)	Matric (n=75)	Graduate (n=45)
1	High PTSD	81 (52.94%)	26 (41.26%)	55 (61.11%)	21 (63.63%)	30 (40%)	30 (66.66%)
2	Moderate PTSD	51 (33.33%)	22 (34.92%)	29 (32.22%)	7 (21.21%)	32 (42.66%)	12 (26.66%)
3	Low PTSD	21 (13.70%)	15 (23.80%)	6 (6.66%)	5 (15.15%)	13 (17.33%)	3 (6.66%)
4	Low Gratitude	47 (30.71%)	18 (28.57%)	29 (32.22%)	12 (36.36%)	19 (25.33%)	16 (35.55%)
5	ModerateGratitude	62 (40.52%)	25 (39.68%)	37 (41.11%)	8 (24.24%)	36 (48%)	18 (40%)
6	High Gratitude	44 (28.75%)	20 (31.74%)	24 (26.66%)	12 (36.36%)	20 (26.66%)	12 (26.66%)

The observed gender disparity aligns with recent studies that have reported a higher prevalence of post-traumatic stress disorder (PTSD) among women.[23] Furthermore, it is worth noting that there exists a correlation between higher education and elevated levels of post-traumatic stress disorder (PTSD). This correlation is supported by previous research studies that have demonstrated a higher prevalence of trauma exposure among educated individuals within specific populations.[24] Additionally, connections have been established between education and engagement in spiritual practices, as evidenced by the findings.[25]

Previous research has shown that females cope with stress through social support seeking, while males use problem-solving strategies.[26] This result supports earlier research indicating a favorable correlation between mental health outcomes and education.[27] Bahramian et al. (2023) Observed that female paediatric cancer caregivers had more distress and anxiety than male caregivers.[28] Female caregivers of children with cancer had higher stress, anxiety, and depression than male

Table 3. Independent t-test results of various factors

Variables	Mean	Standard Deviation	P-Value
Gender	1.59	.494	<.001
Age	36.78	10.406	<.001
Education	2.09	.710	<.001
RWP	1.37	.750	<.001
PTSD1	46.8562	15.61899	<.001
Gratitude	25.11	9.127	<.001

Table 4. Pearson correlation between PTSD and Gratitude

Variables	Mean	Standard Deviation	Significance (P-Value)	Pearson Correlation Coefficient (r)
PTSD	46.8562	15.61899	<.001	-.433
Gratitude	38.0261	3.49237		

caregivers.[29] Zhang et al. (2018) discovered that cancer caregivers with more excellent education had better mental health.[30] The findings of our study align with prior research, which has consistently demonstrated that the career burden is linked to depression among individuals providing care for cancer patients.[31]

A complicated and multidimensional relationship exists between PTSD symptoms and gratitude. Although greater levels of gratitude are linked to fewer symptoms of PTSD,[32] people with PTSD may have lower average levels of positive emotion and have trouble controlling them.[33] Maladaptive cognitive emotion control techniques, such as catastrophizing and negative cognitions also predict some PTSD symptom clusters.[34] Furthermore, the mediation role of gratitude in the association between insecure attachment and relationship satisfaction suggests that PTSD patients could benefit from gratitude therapy.[35] These results emphasize the need for more studies to comprehend the mechanisms and possible treatments of PTSD as well as the possibility of gratitude as a protective element.

Conclusion

Overall, the results of this study point to the possibility that practicing gratitude can help pediatric cancer caregivers avoid or lessen the severity of post-traumatic stress disorder (PTSD) symptoms, making it an attractive target for treatments to improve mental health outcomes. The study emphasizes the need to address the mental health issues of caregivers, delving more into the underlying processes of PTSD and gratitude and looking into creating gratitude interventions specifically designed for this group to improve resilience and mitigation.

References

1. Huot V, Fitzpatrick TR. The effect of physical activity on post-traumatic stress disorder among parents of pediatric cancer survivors. In: Quality of life among cancer survivors: Challenges and strategies for oncology professionals and researchers. Cham: Springer International Publishing; 2018. p. 143-54. DOI: 10.1007/978-3-319-75223-5_9.
2. Jones BL. The challenge of quality care for family caregivers in pediatric cancer care. Semin Oncol Nurs 2012;28(4):213-20. DOI: 10.1016/j.soncn.2012.09.003.
3. Lemos MS, Lima L, Silva C, Fontoura S. Disease-related parenting stress in the post-treatment phase of pediatric cancer. Compr Child Adolesc Nurs 2020;43(1):65-79. DOI: 10.1080/24694193.2019.1570393.
4. Gerhart J, deBettencourt J, McLean KA, Kent P. Posttraumatic stress disorder and posttraumatic growth in a national sample of pediatric oncology professionals. Psychooncology 2019;28(8):1770-3. DOI: 10.1002/pon.5156.
5. Ochoa-Dominguez CY, Miller KA, Banegas MP, Sabater-Minarim D, Chan RY. Psychological impact and coping strategies of Hispanic parents of children with cancer: A qualitative study. Int J Environ Res Public Health 2023;20(11):5928. DOI: 10.3390/ijerph20115928.
6. Suhag V, Sunita BS, Vats P, Lohia N, Pandya T, Singh V, et al. Psychosocial support for distressed parents of pediatric cancer patients. Integr Pediatr Child Care 2019;2(1):76-81. DOI: 10.18314/IPCC.v2i1.1592.
7. Rajabi M, Bastami M, Shahvaroughi Farahani N, Tavanaie AH, Ghanbari B, Alasti H. Religious coping as a predictor of the burden of care in caregivers of end-stage cancer patients. Iran J Nurs 2018;31(114):6-16. DOI: 10.29252/IJN.31.114.6.
8. Desjardins L, Rodriguez E, Dunn M, Bemis H, Murphy L, Manring S, et al. Coping and social adjustment in pediatric oncology: From diagnosis to 12 months. J Pediatr Psychol 2021;45(10):1199-207. DOI: 10.1093/jpepsy/jsaa077.

9. Freitas ACM, Vilela AL, Ferraz GFL, Marcon G, Filho JLQ, Gonçalves LC, et al. Abordagem psicossocial do diagnóstico inicial na oncopediatria. Rev Eletr Acervo Saude 2021;13(2):e5546. DOI: 10.25248/REAS.e5546.2021.
10. Yeung NCY, Cheung KC, Chau HC, Leung AWK, Li CK, Lam TTN, et al. Transition from acute treatment to survivorship: Psychosocial adjustments of Chinese parents of children with cancer or haematological disorders. Int J Environ Res Public Health 2021;18(15):7815. DOI: 10.3390/ijerph18157815.
11. Brown EJ, Cohen JA, Mannarino AP. Trauma-focused cognitive-behavioral therapy: The role of caregivers. J Affect Disord 2020;277:39-45. DOI: 10.1016/j.jad.2020.07.123.
12. Steliarova-Foucher E, Colombet M, Ries LAG, Moreno F, Dolya A, Bray F, et al. International incidence of childhood cancer, 2001–10: A population-based registry study. Lancet Oncol 2017;18(6):719-31.
13. Shin JY, Kang TI, Noll RB, Choi SW. Supporting caregivers of patients with cancer: A summary of technology-mediated interventions and future directions. Am Soc Clin Oncol Educ Book 2018;38:838-49.
14. Önal G. Kanserli çocukların annelerinin başa çıkma davranışlarının incelenmesi. J Soc Res Behav Sci 2022;8(16):638-50. DOI: 10.52096/jsrbs.8.16.43.
15. Jadili MA, AA T. The relationship between post-traumatic stress disorder and coping strategies among patients with cancer in Gaza Strip. J Nurs Health Stud 2017;2(1). DOI: 10.21767/2574-2825.100011.
16. Weathers FW, Litz BT, Keane TM, Palmieri PA, Marx BP, Schnurr PP. The PTSD Checklist for DSM-5 (PCL-5). Natl Cent PTSD 2013.
17. McCullough ME, Emmons RA, Tsang JA. The Gratitude Questionnaire—Six-Item Form (GQ-6). 2001.
18. Jans-Beken L, Lataster J, Peels D, Lechner L, Jacobs N. Gratitude, psychopathology and subjective well-being: Results from a 7.5-month prospective general population study. J Happiness Stud 2018;19(6):1673-89.
19. Chang B, Li T, Xie Q, Ji X, Dai Y, Wang Z. Relationships among post-traumatic stress disorder, gratitude and posttraumatic growth in terminal cancer patients. Chin J Behav Med Brain Sci 2017;:374-8.
20. Richardson AL, Gallagher MW. Giving thanks is associated with lower PTSD severity: A meta-analytic review. J Happiness Stud 2021;22(6):2549-62. DOI: 10.1007/s10902-020-00322-9.
21. McGuire AP, Fogle BM, Tsai J, Southwick SM, Pietrzak RH. Dispositional gratitude and mental health in the U.S. veteran population: Results from the National Health and Resilience Veterans Study. J Psychiatr Res 2021;135:279-88. DOI: 10.1016/j.jpsychires.2021.01.020.
22. Santre M, Rathod J, Maidapwad S. Prevalence of emotional distress in cancer patients. IOSR J Dent Med Sci 2014;13(6):9-14.
23. Eames C, O'Connor D. The role of repetitive thinking and spirituality in the development of posttraumatic growth and symptoms of posttraumatic stress disorder. PLoS One 2022;17(8):e0272036. DOI: 10.1371/journal.pone.0272036.
24. Hylton L. Trauma, spirituality and healing: A journey through the lens of an incarcerated person. In: Prime Archives in Religions and Theology. Vide Leaf; 2022.
25. Sanchez M, Dillon F, Ruffin B, De La Rosa M. The influence of religious coping on the acculturative stress of recent Latino immigrants. J Ethn Cult Divers Soc Work 2012;21(3):171-94.
26. Czyżowska N, Raszka M, Kalus A, Czyżowska D. Posttraumatic growth and spirituality in mothers of children with pediatric cancer. Int J Environ Res Public Health 2021;18(6):2890. DOI: 10.3390/ijerph18062890.
27. Bakula DM, Sharkey CM, Perez MN, Espeleta HC, Gamwell KL, Baudino M, et al. The relationship between parent distress and child quality of life in pediatric cancer: A meta-analysis. J Pediatr Nurs 2020;50:14-9.
28. Bahramian A, Shabani A, Naserbakht M, Hadi F. Traumatic events exposure and post-traumatic stress disorder in caregivers of patients with bipolar disorder, bipolar disorder and comorbid post-traumatic stress disorder and multiple sclerosis. Med J Islam Repub Iran 2023;37(1):4-9.
29. Gates MV, Lester EG, Reichman M, Silverman IH, Lin A, Vranceanu AM. Does gender moderate resiliency variables and posttraumatic stress symptoms in informal caregivers of neurocritical care patients? An exploratory study. Psychol Health Med 2024;29(1):22-38. DOI: 10.1080/13548506.2023.2185268.
30. Zhang L, Nan G, Mao Y, Chi L. Rapid improvement of angiostenosis due to isolated middle cerebral artery dissection. Medicine (Baltimore) 2018;97(4):e9695.
31. Geng H-m, Chuang D-m, Yang F, Yang Y, Liu W-m, Liu L-h, et al. Prevalence and determinants of depression in caregivers of cancer patients. Medicine (Baltimore) 2018;97(39):e11863.
32. Weiss NH, Dixon-Gordon KL, Peasant C, Sullivan TP. An examination of the role of difficulties regulating positive emotions in posttraumatic stress disorder. J Trauma Stress 2018;31(5):775-80.
33. Pugach CP, May CL, Wisco BE. Positive emotion in posttraumatic stress disorder: A global or context-specific problem? J Trauma Stress 2023;36(2):444-56.
34. Kaczkurkin AN, Zang Y, Gay NG, Peterson AL, Yarvis JS, Borah EV, et al. Cognitive emotion regulation strategies associated with the DSM-5 posttraumatic stress disorder criteria. J Trauma Stress 2017;30(4):343-50.
35. Vollmann M, Sprang S, van den Brink F. Adult attachment and relationship satisfaction: The mediating role of gratitude toward the partner. J Soc Pers Relat 2019;36(11-12):3875-86.

Authors' Contribution Statement

NB contributed to the conception, design, acquisition, interpretation of data, drafting of the manuscript, critical review, and final approval of the version to be published. MAK contributed to the design, acquisition, analysis, drafting of the manuscript, and critical review of the manuscript. SI contributed to the design, acquisition, analysis, drafting of the manuscript, and critical review of the manuscript. MSH contributed to the analysis, interpretation of data, drafting of the manuscript, and critical review of the manuscript. RS contributed to the design, acquisition, analysis, and interpretation of data. NR contributed to the design, acquisition, analysis, drafting of the manuscript, and critical review of the manuscript. All authors are accountable for their work and ensure the accuracy and integrity of the study.

Conflict of Interest

Authors declared no conflict on interest

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None

Data Sharing Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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