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# The Moderating Effect of Spiritual Well-Being on the Relationship Between Childhood Abuse Experiences in Adults and Mental Disorders

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#### Abstract

This study explores the relationship between childhood abuse experiences and subsequent mental disorders in adults, with a particular focus on the moderating role of spiritual well-being. Using self-reported data from 210 graduate students in the Daejeon and Chungcheong regions, the findings demonstrate that spiritual well-being significantly moderate how childhood abuse impacts adult mental health. Specifically, individuals with lower levels of spiritual well-being experience a greater exacerbation of methal disorders related to past abuse, while those with higher levels show a buffering effect. These results suggest that enhancing spiritual well-being could be a vital component of therapeutic interventions aimed at preventing mental disorders in adults who have experienced childhood abuse. We highlight the potential benefits of incorporating spiritual well-being into mental health strategies and call for additional research to substantiate these findings across broader populations. This unique contribution underscores the importance of considering spiritual factors int the therpeutic process, offering a new and valuable perspective in the field of mental health research.

**Keywords:** Childhood Abuse Experiences, Mental Disorders, Spiritual Well-Being.

# 1. Introduction

Childhood is a critical period for emotional and psychological development; however, negative experiences during these formative years can result in lasting damage to an individual's personality and mental health. Among these experiences, sustained abuse from parents or primary caregivers is particularly detrimental. Prolonged exposure to such abuse has been identified as a major factor leading to serious physical and psychological mal-adaptations in adulthood. When children face parental criticism or violence, they are likely to experience a range of psychiatric symptoms including obsessive-compulsive disorders, hostility, and paranoia [1]. These early traumatic experiences often hinder their ability to develop essential self-care and impulse control abilities, which complicates efforts to maintain mental health as they transition into adulthood [2].

Recent data released by the Ministry of Health and Welfare reveals a concerning trend: the rate of child abuse victims per 100,000 population in South Korea has dramatically increased from 72.5% in 2013 to

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384.7% in 2022 [3]. This significant rise in reported incidents highlights the pressing and continuous need for comprehensive research into the impact and prevention of child abuse within Korean society.

Traditionally, the study of child abuse focused predominantly on physical harm. However, as scholarly attention has expanded, the scope of what constitutes child abuse has broadened significantly. Today, it encompasses not only physical and emotional abuse but also sexual abuse, and various forms of neglect. These abuses are generally categorized into five widely recognized types: physical abuse involves the direct infliction of physical harm to the child; sexual abuse includes any inappropriate sexual contact or behaviors between an adult and a child; emotional abuse consists of verbal violence or emotional threats; physical neglect is the failure to provide essential necessities such as food, clothing, and shelter; and emotional neglect involves the lack of emotional support and psychological care, depriving the child of love and a sense of belonging [4].

The negative impacts of these types of abuse are profound and enduring, affecting the victim's mental health well into their adult life. Children, being absolute victims in these scenarios, often find themselves forced to suppress their emotions in response to the abuse [5]. This suppression, along with the guilt and shame that arise from misconstruing the abuse as a consequence of their own actions, severely affects their identity formation and prolongs psychological distress [6]. Extensive research has consistently demonstrated that the extent of child abuse experience(CAE) is a strong predictor of a host of mental health issues in adulthood, including psychosis and aggression [7], depression and anxiety [8, 9], various internalizing symptoms [10], challenges in emotional regulation and interpersonal relationships [11], and even suicidal thoughts [12]. For example, a longitudinal study conducted in Australia found that children who had experienced sexual abuse were significantly more likely to develop schizophrenia in adulthood compared to those who had not faced such abuse [13].

Despite these potential negative outcomes, it is important to note that not all individuals who experience childhood abuse will necessarily exhibit adverse psychological effects. Studies have shown that certain psychological factors can empower individuals to overcome the negative impacts of their abusive experiences. These factors can lead to enhanced self-confidence, improved interpersonal relationships, and a more positive outlook on life [14, 16]. This research focuses on spirituality as one of these pivotal psychological variables. In recent decades, the integration of spirituality into holistic health models has gained recognition for its importance in achieving optimal health, which encompasses physical, psychological, and spiritual dimensions [17, 19].

Spirituality, which is often confused with religiosity, actually transcends specific religious practices and beliefs. It involves broader, more subjective experiences related to the absolute, or the essence of being [20]. While religiosity is specifically tied to practices within established religious frameworks and is applicable only to adherents of those religions, spirituality is a more universal concept that can be applied across various contexts and cultures. One of the key aspects of spirituality that has been extensively studied is spiritual well-being(SWB), as conceptualized by Paloutzian and Ellison [21]. SWBis bifurcated into two primary dimensions: religious well-being, which refers to a sense of well-being felt in relation to a deity or God, encapsulating a tendency to believe in and rely upon a higher power; and existential well-being, which pertains to a sense of satisfaction and meaning derived from one's relationships with oneself, others, and the environment.

Extensive research examining the relationship between SWB and mental health-related variables has uncovered significant findings. For instance, studies have documented a significant negative correlation between SWB and various mental health challenges such as hostility [22]. Moreover, increases in SWB have

been shown to significantly reduce symptoms of depression and aggression [23], anxiety [24], addictive behaviors like smartphone and cybersex addiction [25], and internet addiction [26]. Additionally, high levels of SWB have been associated with the enhancement of proactive coping strategies and adaptive emotional regulation [27], as well as an increase in self-esteem [28]. Such high SWBenables individuals to engage in deep reflective thinking about traumatic events, striving to redefine life's purpose and meaning [18]. Moreover, reliance on faith can provide a stable emotional foundation [22], thus enhancing the ability to control negative emotions and thoughts associated with past CAE.

In light of these findings, SWB is anticipated to act as a protective factor, potentially mitigating the negative effects of CAE. While existing research has documented the moderating effects of SWB on the adaptation to college life post-abuse [29], as well as its mediating effects between CAE and depression and aggression [23], and the mediating effects in the relationship between CAE and post-traumatic growth [16], there remains a dearth of studies specifically analyzing the moderating effect of SWB on the relationship between CAE and mental disorders(MD). Therefore, this study aims to fill this gap by validating the moderating role of SWB, thereby offering valuable insights into effective counseling interventions for adults who have experienced childhood abuse, aiming to support them in leading mentally healthy and fulfilling lives.

The research questions for this study are: What is the relationship between CAE, SWB, and MD? And, what is the moderating effect of SWB on the relationship between CAE and MD? This inquiry will provide essential variables for consideration and practical information for counseling interventions aimed at helping those affected by childhood abuse navigate their journey towards a more balanced and satisfying life.

### 2. Research Method

# 2.1 Research Subjects

This study conducted a survey targeting college and graduate students in the Daejeon and Chungnam regions. The survey period spanned from October 2018 to December 2018. Out of the collected data from 220 respondents, 10 questionnaires were excluded due to insincere responses, leaving data from 210 participants for analysis in the research model. Looking at the distribution of the research subjects, there were 96 males (45.7%) and 114 females (54.3%). In terms of age distribution, there were 155 individuals in their 20s (73.8%), 22 in their 30s (10.5%), 20 in their 40s (9.5%), and 13 over 50 (6.2%).

#### 2.2 Measurement Tools

#### 1) Childhood Abuse Experiences

To measure experiences of childhood abuse, the study utilized the Childhood Trauma Questionnaire-Short Form (CTQ-SF), developed by Bernstein and Fink and validated by Kim Eunjung and Kim Jinsuk [9]. This scale comprises a total of 25 items, including five items each for emotional abuse, emotional neglect, physical abuse, physical neglect, and sexual abuse. Each item is rated on a 4-point Likert scale ranging from 'Never (1)' to 'Often (4)'. The scores for five items under emotional neglect and one item under physical neglect are inversely scored, indicating that higher total scores represent more severe experiences of childhood abuse. The overall Cronbach's alpha reliability coefficient for this study was 0.91, with the subscales measured as follows: emotional abuse at 0.80, emotional neglect at 0.94, physical abuse at 0.84, physical neglect at 0.55, and sexual abuse at 0.70.

#### 2) Spiritual Well-Being

To assess SWB, this study employed the SWB Scale, developed by Paloutzian and Ellison and revised by Oh Bokja [30]. The scale is designed to measure SWB, which includes religious well-being(RWB)—reflecting a sense of wellness in one's relationship with God—and existential well-being(EWB), which relates to the sense of meaning and purpose in life. The scale consists of 20 items, with odd-numbered items assessing RWB and even-numbered items assessing EWB. Responses to each item range from 'Not at all (1)' to 'Very much so (6)' on a 6-point Likert scale, with negatively phrased items being reverse scored, meaning that higher scores indicate higher levels of SWB. The total score of the scale is calculated by summing the scores of all 20 items. In this study, the overall Cronbach's alpha coefficient was 0.95, with the sub-scales measuring 0.93 for RWB and 0.91 for EWB.

#### 3) Mental Disorders

To measure mental disorders(MD), this study utilized the Korean Mental Disorder Inventory (K-MDI), developed by Lim Youngjin et al. [31]. This self-assessment scale consists of 14 items, with 13 items answered using a 5-point Likert scale ranging from 'Not at all (1)' to 'Very much so (5)'. The remaining item assesses the degree of difficulty an individual has experienced in social functioning in their job, family, and interpersonal relationships, using a 4-point Likert scale. The total score is calculated by summing the first 13 items, and a higher score indicates a higher level of MD. The Cronbach's alpha coefficient for this study was 0.84.

#### 2.3 Data Analysis

The data collected in this study were analyzed using SPSS 22.0 and Hayes' PROCESS Macro [32]. First, descriptive statistics and Cronbach's alpha for each variable were computed. Second, Pearson correlation analysis was conducted to examine the relations among variables. Third, to test the moderating effect of SWB between CAE and MD, PROCESS Macro Model 1 was employed to check the significance of the interaction effects and simple slopes. Interaction graphs, generated with specific values (mean±1SD) for the independent and moderating variables, were used to prove the patterns of the moderating effects.

#### 3. Research Results

#### 3.1 Descriptive Statistics and Correlation of Major Variables

The results of the descriptive statistics and correlation analysis between variables are as shown in Table 1. The relationship between CAE and SWB was not significant (r = -0.123, p < 0.05), whereas a significant positive correlation was found between CAE and mental health (r = 0.299, p < 0.001). SWB exhibited a significant negative correlation with mental health MD (r = -0.314, p < 0.001).

rable 1. Correlation analysis, average, standard deviation					
variable	1	2	3		
1.childhoodabuse experience.	1				
2.Spiritual well-being	-0.123	1			
3. Mental disorders	0.299***	-0.314***	1		
M	35.091	96.819	20.39		

Table 1. Correlation analysis, average, standard deviation

SD	10.146	18.904	6.038
*** p<.001			

# 3.2 Analysis of the Moderating Effect of Spiritual Well-Being on the Relationship between Childhood Abuse Experiences and Mental Disorders

To analyze the moderating effect of SWB on the relationship between CAE and MD, PROCESS Macro Model 1 was used. To reduce the issue of multicollinearity, mean centering was applied to the variables of CAE and SWB.

R-square increase due to the interaction variable between CAE and SWB was 3%, and the regression coefficient was significant (B = -.005, p < .01). This indicates that the impact of CAE on MD varies depending on the level of SWB.

predictive variable	В	SE	t	F
childhoodabuse experience	0.155	0.037	4.128***	
Spiritual well-being	-0.085	0.020	-4.236***	16.853***
childhood abuse experience ×Spiritual well-being	-0.005	0.002	-2.760**	10.000

Table 2. Results of testing moderator effects

To further probe the specific patterns of the moderating effect, As shown in Figure 1, connecting the mean±1SD values of the independent variable and the moderating variable. In groups with high SWB, there was generally lower MD, and even as CAE increased, the increase in MD was gradual. However, in groups with low SWB, an increase in CAE was associated with a steep increase in MD. These findings suggest that SWB plays a moderating role in buffering the impact of CAE on MD [33].



4.1 Figures. A graphical presentation of moderator effects

<sup>\*\*\*</sup> p<.001

The significance of the simple slopes for the levels of SWB between CAE and MD is presented in Table 2. At low levels of SWB, the simple slope (B =0.255, p<0.001) showed a significant positive effect, while at high levels of SWB, the simple slope (B =0.054, p>0.05) was not significant.

Spiritual well-being	В	SE	t	
-1S	0.255	0.052	4.955***	
+1S	0.054	0.053	1.017	

**Table3. Results of Testing Simple Slopes** 

#### 4. Discussion and Conclusion

In this study, we analyzed the moderating effect of spiritual well-being on the relationship between CAE and MD among adults, and the discussion of the results is as follows.

Firstly, the analysis of the correlation between variables revealed that the relationship between CAE and MD showed a significant positive correlation. This is consistent with studies that have reported positive correlations between childhood abuse and conditions such as psychosis [7], depression [8, 9], aggression [23], and suicidal thoughts [12]. Following this, a significant negative correlation was observed between SWB andMD. This aligns with studies that have reported significant negative correlations between SWB and depression [23, 28], and hostility [22]. Lastly, the correlation between CAE and SWB in this study was not significant. This result does not match studies that reported a significant negative correlation between childhood abuse and SWB [23, 29], suggesting that the inconsistent correlation between childhood abuse and SWB needs to be further explored through repetitive research.

Secondly, SWB showed a significant moderating effect in the relationship between CAE and MD. Specifically, the positive impact of childhood abuse on MD increased as the level of SWB decreased, and this impact was more moderate as the level of SWB increased. This implies that SWB acts as a moderating variable that mitigates the effects of CAE on MD. Although direct comparisons are difficult due to a lack of prior research, studies on the moderating effect of SWB between CAE and college life adjustment [29], the negative impact of SWB on depression and aggression [23, 34], and the positive impact of spirituality on post-traumatic growth [16] are consistent with the context of this study. Even those who have experienced childhood abuse can gain emotional stability and peace of mind by relying on and believing in God, which not only increases their confidence in managing negative emotions but also motivates them to live a meaningful and purposeful life, thus reducing the likelihood of developing MD [18]. The results of this study suggest that interventions designed to enhance SWB in counseling sessions for adults with CAE could prevent MD.

The significance and implications of the findings from this study are as follows. Firstly, prior research has mainly focused on verifying the mediating effects of spirituality, but this approach has limitations in specifically clarifying the protective role of spirituality. However, by identifying the specific moderating effect of SWB between CAE and MD, this study contributes to a deeper understanding and underscores the importance of SWB. Secondly, the group with higher levels of SWB exhibited relatively lower severity and minimal increase inMD compared to the group with lower levels. This suggests that SWB can serve as a highly beneficial protective factor for the mental health of adults who have experienced childhood abuse. Therefore,

<sup>\*\*\*</sup> p<0.001

when counseling clients who have experienced childhood abuse or conducting group programs, it is necessary to incorporate strategies and activities that intervene in the client's spirituality. However, there is generally a neglect of clients' spirituality in counseling practice. This may be due to a lack of counselor training that integrates understanding of humans from physical, mental, and spiritual perspectives. Thus, there is a need to develop counselor training programs that can comprehend the values of spirituality, religious culture, and faith life, and apply them in counseling.

The limitations and suggestions for future research are as follows. Firstly, the data for this study were collected through questionnaires and are cross-sectional, which presents challenges in drawing definitive conclusions about causality. Therefore, further longitudinal and experimental studies are needed to more accurately understand the relationships between CAE, MD, and SWB and to clarify causality. Secondly, the study subjects were adults residing in the Daejeon area, which limits the generalizability of the findings to all adults in different regions. Future studies should consider collecting data from various regions. Thirdly, the impact of CAE can vary depending on the duration or type of abuse and the gender of the victim. Future research should consider the specific characteristics of CAE to examine how the moderating effect of SWB manifests.

#### References

- [1] Kim, KyungSuk., A Study on the Influence of Child Abuseon Children's Mental Health, Ph.M. Thesis. Kyonggi University, Korea., 2008.
- [2] Kent, A, & Waller, G, "Childhood emotional abuse and eating psychopathology," Clinical Psychology Review, Vol. 20, No. 7, pp. 887-903, Oct 2000.
  - DOI: https://doi.org/10.1016/S0272-7358(99)00018-5
- [3] Ministry of Health and Welfare, https://www.index.go.kr/unity/potal/indicator/IndexInfo.do?cdNo=2&clasCd=8&idxCd=8054&upCd=19
- [4] Bernstein, D. P., Ahluvalia, T., Pogge, D., & Handelsman, L, "Validity of the Childhood Trauma Questionnaire in an adolescent psychiatric population," *Journal of the American Academy of Child & Adolescent Psychiatry*, Vol. 36, No. 3, pp. 340-348, Mar 1997. DOI: https://doi.org/10.1097/00004583-199703000-00012
- [5] Ra, Young-Sun., *Relationship between childhood emotional abuse and tendency toward complex PTSD: focusing on the moderating effect of forgiveness*, Ph.M. Thesis. Chung-Ang University, Korea., 2009.
- [6] Janoff-Bulman, R., Shattered assumptions: Towards a new psychology of trauma, Free Press, 1992.
- [7] Min-Jung Shin, & Ji Young Choi, "The Effect of Childhood Abuse and Neglect on Pathological Personality in Depressive Patients," *The Korean Journal of Health Psycholog*, Vol. 20, No. 4, pp. 719-738, 2015.
  - DOI: 10.17315/kjhp.2015.20.4.002
- [8] Yu Na Ko, "The Effects of Emotional Trauma in Childhood on the Depression and Anxiety Level for College Students: Focusing on the moderating effects of ego-resilience," *Journal of Youth Welfare*, Vol. 18, No. 1, pp. 105-132, 2016. DOI: 10.17315/kjhp.2019.24.4.004
- [9] Kim Eun jung, & Kim Jin sook, "The Relation Between Childhood Trauma and Early Adulthood Depression: the Mediating Effects of Early Maladaptive Schemas, Ambivalence over Emotional Expressiveness and Avoidance Coping Style," *The Korean Journal of Counseling and Psychotherapy*, Vol. 22, No. 3, pp. 605-630, 2010.
- [10] Sachs-Ericsson, N., Verona, E., Joiner, T., & Preacher, K. J, "Parental verbal abuse and the mediating role of self-criticism in adult internalizing disorders," *Journal of affective disorders*, Vol. 93, No. 1-3, pp. 71-78, Mar 2006.
  DOI: https://doi.org/10.1016/j.jad.2006.02.014
- [11] Ko, Na Rae., The Effect of Emotional Regulation Difficulties and Interpersonal Problem who had Complex Trauma in Childhood, Ph.M. Thesis. Ewha Womans University, Korea., 2008.
- [12] Kim, Soon Ae., *The effect of abuse experience on suicide ideation in adolescents Focused on the emotion regulation*, Ph.M. Thesis. Yongmoon Graduate School of Counseling Psychology, Korea., 2016.

- [13] Cutajar, M. C., Mullen, P. E., Ogloff, J. R., Thomas, S. D., Wells, D. L., & Spataro, J., "Schizophrenia and other psychotic disorders in a cohort of sexually abused children," *Archives of general psychiatry*, Vol. 67, No. 11, pp. 1114-1119, Nov 2010.
  DOI: 10.1001/archgenpsychiatry.2010.147
- [14] Eun-Hye Park, & Min-Kyu Rhee, "The Effect of Ego-Resiliency on Posttraumatic Growth: The Mediating Effects of Stress Coping and Cognitive Emotion Regulation," *The Korean Journal of Health Psycholog*, Vol. 21, No. 2, pp. 623-640, 2016. DOI: 10.17315/kihp.2016.21.3.009
- [15] Afifi, T. O., & MacMillan, H. L., "Resilience following child maltreatment: A review of protective factors," *The Canadian Journal of Psychiatry*, Vol. 56, No. 5, pp. 266-272, May 2011.
  DOI: https://doi.org/10.1177/0706743711056005
- [16] Song Yi Kim., *The relationship between traumatic experience and post-traumatic growth: mediation of spirituality and forgiveness*, Ph.M. Thesis. Sungkyul University, Korea., 2019.
- [17] Ji Ah Park., Relationship to Resilience, Spiritual well-Being and Parent Attachment: Comparison among resilient adolescents, at-risk adolescents and competent adolescents, Ph.M. Thesis. Ewha Womans University, Korea., 2003.
- [18] Hyewon Park, & Hyun-nie Ahn, "The Effects of Posttraumatic Stress Symptoms, Spirituality, and Rumination on Posttraumatic Growth," *The Korea Journal of Counseling*, Vol. 7, No. 1, pp. 201-214, 2006.
- [19] Yong-Hwan, Kim, Gum-Ju Choi, Seung-Don Kim, & Seung-Don Kim, "An analytic study on the trends of spiritually in korea," *The Korea Journal of Counseling*, Vol. 10, No. 2, pp813-829, 2009.
- [20] Hill, P. C., & Pargament, K. I., "Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research," *American Psychologist*, Vol. 58, pp64–74, Jan 2003.
  DOI: https://doi.org/10.1037/1941-1022.S.1.3
- [21] Paloutzian, R. F., & Ellison, C. W., Loneliness, spiritual well-being and the quality of life. Loneliness: A Source Book of Current Theory, Rresearch and Therapy, 1982.
- [22] Yoon Mi Choi, Jee Yon Lee, & Nan Mee Yang, "The Effects of Spirituality on the Aggression Levels of Prisoners: With the Mediation of Negative Mood Regulation Expectancies," *The Korean Journal of Counseling and Psychotherapy*, Vol. 20, No. 2, pp, 537-551, 2008.
- [23] Kim, Sook-Hee., Structural relationships among Childhood Trauma, Early Maladaptive Schemas and Spirituality related to Emotional/Behavioral Problems of Prison Inmates, Ph.D. Thesis. Kyungpook National University, Korea., 2017.
- [24] Kim, Eun-Jeong., *The Effect of Religious Orientation and Spiritual Well-Being of Adolescent son Anxiety and Depression*, Ph.M. Thesis. Ewha Womans University, Korea., 2006.
- [25] Park, Myung-Jun, & Shin, Sung-Man, "The Effects of Spiritual Well-being on Addictions to Internet Games, Cybersex, and Smartphone Use among Korean Youths," *Korean Journal of Counseling*, Vol. 15, No. 2, pp, 753-771, 2014.
  DOI: http://dx.doi.org/10.15703/kjc.15.2.201404.753
- [26] Kim, Young-Kyung, "The Influence of Stress on Alcohol Addiction, Internet Addiction and Problem Gambling: Spiritual Well-being as Mediator," Korean Journal of Counseling, Vol. 14, No. 1, pp, 97-114, 2013.
  DOI: http://dx.doi.org/10.15703/kjc.14.1.201302.97
- [27] Seo Jeong Lee, & Hee Kyung Lee, "The Relation Between Spirituality and Coping: Cognitive Emotion Regulation as a Mediating Variable," *Journal of Human Understanding and Counseling*, Vol. 32, No. 1, pp. 135-152, 2011.
- [28] Kyung Hyun Suh, Sung Jin Chung, & Ji Hyun Koo, "Spiritual Well-Being, Life Stress, Depression, and Self-Esteem Among College Students," The Korean Journal of Counseling and Psychotherapy, Vol. 17, No. 4, pp, 1077-1095, 2005.
- [29] Dong Seok Cha., Adjustment to college life of students from alcoholic families from the perspective of Minuchin's structural family system model: focusing on the moderating effects of spirituality, Ph.D. Thesis. Keimyung University, Korea., 2015.
- [30] Pok Ja Oh, "A Study of the Correlation Between Spiritual Well-Being and Quality of Life in People with Cancer," *The Journal of Korean Academic Society of Adult Nursing*, Vol. 9, No. 2, pp, 189-198, 1997.
- [31] Young-Jin Lim, Young-Gun Ko, Hee-Cheon Shin, & Yongrae Cho, "Psychometric Evaluation of the Mental Health Continuum-Short Form (MHC-SF) in South Koreans," *Korean Journal of Psychology: General*, Vol. 31, No. 2, pp, 369-386, 2012.
- [32] Hayes, A. F., Introduction to mediation: A regression-based approach, Guilford Press, 2013.
- [33] Bae Byeong Ryeol, Moderation and Mediation Analysis, Cheongram, 2015.
- [34] Ahn, Si-Nae. "The relationship between young Korean adults' depressive symptoms and patterns of interest," *International journal of advanced smart convergence*, Vol. 9, No. 1, pp, 209-214, 2020.