



A Preliminary Report on Relationship between the Subtypes of Early Life Stressor and Clinical Depression

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Background: Clinical depression can critically incapacitate one and make one question his self-worth and future. Estimates claim that out of the world's approximately 7.6 billion population, 264 million people suffer from depression. This study was formulated to contribute data and results of the presence of adverse childhood experiences and its tendency to give rise to clinical depression in adulthood. This article presents data of the first forty cases collected for this study.

Method: Data was collected in the Psychiatric OPD of in a rural hospital, Wardha. Patients of major depressive disorder on treatment and who were above 18 years of age and willing to participate in the study were included in the study sample. Adverse Childhood Experiences – International Questionnaire, Presumptive Stressful Life Event Scale and Hamilton Depression Rating Scales were applied to the sample size.

Results: Among the forty participants 23 (57%) were female and 17 (42.5%) were male. The samples' age group was either between 30 to 50 years old (55%). Most of the participants were married (67.5%). 52.5% had been exposed to experiencing violence in the household and 52.5% of the participants experienced violence in the community. 20% participants were found to still low to moderate depression. 60% of the total sample population perceived themselves to be withstanding severe stress in the current day-to-day life.

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Conclusion: This is a preliminary report to an ongoing research project. We can see glimpses of how exposure to stressors during childhood have the ability to impact a person's mental well-being decades later.

Keywords: Childhood; clinical depression; violence; mental health.

1. INTRODUCTION

Clinical depression affects how someone thinks and feels and disrupts basic biological functions like sleeping and eating [1]. It can critically incapacitate one and make one question his self-worth and future. The groundless insecurities can eventually encroach on one's personal life, leading to stressful kinship, fellowship, and workmanship [2]. Estimates claim that out of the world's approximately 7.6 billion population, 264 million people suffer from depression [3]. The World Health Organization now reports depression as a paramount issue of global health as it is the largest component of global disability [4].

While medications, psychotherapy, and psychosocial support have all proven to help depressed individuals, but tackling this dilemma at its roots, we may be able to prevent the mental issues from developing altogether. Studies have found a positive correlation between stressful inimical experiences during childhood and adolescence and various psychiatric illnesses including depression and personality disorders [5–7].

Adversities during one's early life may be experienced as emotional neglect or abuse, physical neglect or abuse, or stressful household situations such as guardians with psychiatric or substance use issues, niggardly food, and shelter and inadequate encouragement and support [8,9]. The Adverse Childhood Experiences – International Questionnaire (ACE - IQ) is a simple questionnaire that broadly screens individuals for household challenges, neglect, and abuse suffered below 18 years of age [9–11]. Of the various adverse childhood experiences, emotional abuse is by large a parameter unrecognized by medical specialists and school authorities due to its discrete manifestations. It is imperative to be able to successfully identify these traumatic occurrences so they may be prevented in younger years and help people grow into well-adjusted individuals.

This article presents data of the first forty cases collected for this study.

1.1 Objectives

This study was formulated to contribute data and results of the presence of adverse childhood experiences and its tendency to give rise to clinical depression in adulthood. The sociodemographic profile of individuals diagnosed with major depressive disorder and the impact of stressors in their present life was also studied to find a significant correlation.

2. METHODOLOGY

Study design: Retrospective cross-sectional study.

Study setting: Data was collected in the outpatient department of the Psychiatric Department in Acharya Vinoba Bhave Rural Hospital, Wardha, from January 2020 to September 2020.

Study population: Patients who visited the outpatient department for major depressive disorder diagnosed by the Diagnostic and Statistical Manual of Mental Disorders, 5th edition, and on treatment for the same for a minimum of 1 month were approached to participate in our study. All patients who were above 18 years of age and willing to participate in the study were included in the study sample. Conditions that disqualified a willing adult patient from being included in the study were comorbidities such as intellectual disability or other developmental disorders and organic illness.

Sample size: Wardha district accommodates approximately 5,00,000 people. We kept the confidence interval at 95% with a margin of error of 5% through which we calculated a total sample size of 139 cases and summed it up to 150. This article presents data of the first forty cases collected for this study.

Study method: The Adverse Childhood Experiences- International Questionnaire evaluates 3 categories of early life stressors- abuse, neglect, and household dysfunction. Scores were recorded as binary values and summed to calculate a total score. Presumptive

Stressful Life Event Scale scores are calculated as no stress less/moderate stress and more than severe stress. Hamilton Depression Rating Scale was used to evaluate the presence or absence of residual depressive symptoms despite being on medications for a minimum of 1 month.

Data analysis: SPSS version 27 and logistic multiple regression analysis were used to calculate the relationship between various abuse and neglect with depression under the influence of independent variables. Chi-square analysis was done to find the relationship between depression, presumptive stressful life events, and the subtypes of early life stressors.

3. RESULTS

The study evaluating the relationship between adverse experiences in childhood with various aspects of depression in adulthood is currently underway and data collection is in progress. The results presented below are preliminary results based on the first forty samples which were collected.

Sociodemographic data: Among the forty participants 23 (57%) were female and 17 (42.5%) were male. The samples' age group was either between 30 to 50 years old (55%). Correspondingly, most of the participants were married (67.5%). Nine (22%) out of the forty patients had deliberately attempted to harm themselves at least once in their lifetime. 32.5% of the patients had at least one biological relative clinically diagnosed with depression during the patient's childhood.

Adverse Childhood Experiences subtypes:

The entire sample size of forty patients had been clinically diagnosed with major depressive disorder sometime time in their life and were on regular medications. Among them, 52.5% had been exposed to experiencing and witnessing members of their household being treated violently during their childhood. Similarly, 21 out of forty or 52.5% of the participants also recalled hearing and witnessing violent arguments or fights among their neighbors and people in the community.

HAM-D and subtypes: The Hamilton depression rating scale was applied to all participants to assess their symptomology despite being on medications. Among the total sample size, twenty participants were found to still low to moderate depression. When we compared the patients, who were in clinical remission or had mild to moderate depressive symptoms to the different early life stress subtypes, contact sexual abuse and community violence showed a positive correlation.

PSLES and subtypes: The Presumptive Life Events Scale was scored and summed as no stress, low to moderate stress, and severe stress. 60% of the total sample population perceived themselves to be withstanding sufficient stress to be categorized as severe stress in the current day-to-day life. When we correlated the three types of presumed stress with the subtypes of childhood traumatic events, emotional abuse showed significant relation.

Table 1. Sociodemographic data

Variable	N (%)
Gender	
Male	17 (42.5)
Female	23 (57.5)
Age Group	
< 30 yrs	13 (32.5)
30 - 50 yrs	22 (55)
> 50 yrs	5 (12.5)
Marital Status	
Unmarried	8 (20)
Married	27 (67.5)
Separated/Divorced	2 (5)
Widowed	3 (7.5)
Attempt to self-harm	
Yes	9 (22)
No	31 (77.5)
Family history of depression	
Yes	13 (32.5)
No	27 (67.5)

Table 2. Adverse childhood experiences subtypes

Adverse childhood experience		N (%)
1.	Physical Abuse	9 (22.5)
2.	Emotional Abuse	16 (40)
3.	Contact sexual abuse	9 (22.5)
4.	Alcohol and or drug abuse user in the house	9(22.5)
5.	Someone chronically depressed, mentally ill, institutionalized, or suicidal	13 (33)
6.	Incarcerated household member	1(2.5)
7.	One or no parent, parental separation, or divorce	12 (30)
8.	Household member treated violently	21 (52.5)
9.	Emotional neglect	24 (60)
10.	Physical neglect	13 (33)
11.	Bullying	6 (15)
12.	Community violence	21 (52.5)
13.	Collective violence	0 (0)

Table 3. HAM-D and subtypes

Variable	Yes (Mild-mod symptoms)	No (Clinical remission)	P-value
Contact Sexual Abuse			
Yes	8	1	0.008
No	12	19	
Community violence			
Yes	14	7	0.02
No	6	13	

Table 4. PSLES and subtypes

PSLES score	Frequency (%)	Emotional abuse		P value
		Yes	No	
No stress (NS)	12 (15%)	1	5	0.0008
Low – Moderate stress (LM)	20 (25%)	9	1	
Severe stress (SS)	48 (60%)	6	18	

4. DISCUSSION

This study's preliminary estimates were found to be dominant's female (57%) which is consistent with standard psychiatric textbooks [12,13] and several previous studies [14,15]. Since there is sufficient research to explain why females more commonly manifest depressive symptoms, it is assumed by most that biological factors like hormonal changes and psychosocial variables increased stress sensitivity, maladaptive coping skills, and multiple social roles play a role in the manifestation of this illness more often in women than in men [12,16,17]. Similarly, texts profess the onset of unipolar and single-episode major depression to be before 45 years of age. Single episode depression without family history may vary at 35 and above whereas the onset of depressive symptoms in those suffering from recurrent episodes starts between 30 and 35 years [12,18].

Genetic and hereditary aspects of psychiatric illness, in general, have been extensively studied and most have concluded that while genes and positive family history can be a predisposing factor [12,19,20], it generally goes hand in hand with environmental factors also. Among mood disorders, depression has a lower heritability compared to bipolar disorder. Appropriately, this initial report reveals about one-third (32.5%) of the samples' biological relatives have been clinically depressed sometime during their lifetime.

Unlike common epidemiological data which reports that risk factors of depression are being single, divorced, or separated whereas participants of this study were majorly married individuals (67%). While this is deviating from the norm, it is essential to highlight that this study is based in a rural region in India where the concept of divorce or separation is looked upon as taboo and avoided despite hardship

[21,22]. Another significant data collected in this study is the perceived stressful life events, in which 25% of the sample claimed to have low to moderate stress and a staggering 60% of the sample affirmed overall severe stress in their day-to-day life. Additionally, the preliminary report of this study found a significant correlation between emotional abuse in childhood and stress in adulthood [23–26]. Studies have defined various types of social stressors faced both during childhood and adulthood to be contributing factors to depression [12,20,27]. Taking these facts into consideration, the difference in results may be rationalized.

On the contrary, we can assume that the married patients have could be exposed to good social support from their spouses and extended family [28–31]. which allows them to be in clinical remission or maintain their mental well-being with minimal and manageable depressive symptoms and medications. This is elaborated with our results in the HAM-D scale where 50% population was found to be asymptomatic with their on-going treatment and the remaining showed to have a low score but otherwise also leading satisfactory lives. As per the initial results of this study, a positive correlation was found between contact sexual abuse and residual symptoms of depression [26,32,33]. Furthermore, the exposure to community violence during childhood was seen in 52.5% of the sample size and it showed to impact residual depressive symptoms ($p=0.02$) [34,35]. More studies are required in this field to support this result [36-39].

5. CONCLUSION

This is a preliminary report to an ongoing research project. While several data agree with general epidemiological knowledge of depression, some results are not aligned with the common belief. Nevertheless, we can already see glimpses of how exposure to acute and/or chronic stressors during childhood may leave a subconsciously long-lasting impact on their impressionable minds and that adverse childhood stressors and experiences do, to some extent, have the ability to impact a person's mental well-being decades later.

It is, therefore, necessary to identify and shield children from such exposure not only to ensure a happy and mentally healthy childhood but happy and mentally healthy adulthood too.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

Approval was obtained from the Institute's Ethical Committee before commencing this study.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. National Institute of Mental Health. NIMH » Depression [Internet]; 2021. [cited 2021 Mar 28]. Available:<https://www.nimh.nih.gov/health/topics/depression/index.shtml>
2. Behere PB, Kumar K, Behere AP. Depression: Why to talk? Indian J Med Res. 2017;145(4):411.
3. World Health Organisation. Depression [Internet]; 2021. [cited 2021 Mar 28]. Available:<https://www.who.int/news-room/fact-sheets/detail/depression>
4. Liu Q, He H, Yang J, Feng X, Zhao F, Lyu J. Changes in the global burden of depression from 1990 to 2017: Findings from the Global Burden of Disease study. J Psychiatr Res. 2020;126:134–40.
5. Hill J. Developmental perspectives on adult depression. Psychoanal Psychother. 2009;23(3):200–12.
6. Collishaw S, Pickles A, Messer J, Rutter M, Shearer C, Maughan B. Resilience to adult psychopathology following childhood maltreatment: evidence from a community sample. Child Abuse Negl. 2007;31(3):211–29.
7. Germine L, Dunn EC, McLaughlin KA, Smoller JW. Childhood Adversity Is Associated with Adult Theory of Mind and Social Affiliation, but Not Face Processing. PLoS ONE [Internet]. 2015;10(6). [cited 2021 Mar 28]; Available:<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4466913/>
8. Childhood Adversity Is Associated with Adult Theory of Mind and Social Affiliation, but Not Face Processing [Internet]; 2019.

- [cited 2019 Aug 5].
Available:<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4466913/>
9. Martins CMS, de Carvalho Tofoli SM, Von Werne Baes C, Juruena M. Analysis of the occurrence of early life stress in adult psychiatric patients: A systematic review. *Psychol Neurosci*. 2011;4(2):219–27.
 10. Zavaschi MLS, Satler F, Poester D, Vargas CF, Piazenski R, Rohde LAP, et al. Associação entre trauma por perda na infância e depressão na vida adulta. *Braz J Psychiatry*. 2002;24(4):189–95.
 11. Adverse childhood experiences (ACEs) and later-life depression: perceived social support as a potential protective factor [Internet]; 2020.
[cited 2020 Jan 31].
Available:<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5588961/>
 12. Sadock BJ, Sadock VA, Ruiz P. Kaplan and Sadock's Comprehensive Textbook of Psychiatry. 10th edition. Wolters Kluwer. 2017;2.
 13. Sadock BJ, Sadock VA, Ruiz P. Kaplan and Sadock's Synopsis of Psychiatry Behavioural Sciencs/Clinical Psychiatry. 11th edition. Wolters Kluwer; 2015.
 14. Schaakxs R, Comijs HC, Lamers F, Kok RM, Beekman ATF, Penninx BWJH. Associations between age and the course of major depressive disorder: A 2-year longitudinal cohort study. *Lancet Psychiatry*. 2018;5(7):581–90.
 15. Hegeman JM, Kok RM, Mast RC van der, Giltay EJ. Phenomenology of depression in older compared with younger adults: Meta-analysis. *Br J Psychiatry*. 2012;200(4):275–81.
 16. World Health Organisation. Gender and Women's Mental Health; 2021.
[cited 2021 Mar 30].
Available:<https://www.who.int/teams/maternal-newborn-child-adolescent-health-and-ageing/maternal-health/about/mental-health-and-substances-use>
 17. Steiner M, Dunn E, Born L. Hormones and mood: From menarche to menopause and beyond. *J Affect Disord*. 2003;74(1):67–83.
 18. Klein DN, Schatzberg AF, McCullough JP, Dowling F, Goodman D, Howland RH, et al. Age of onset in chronic major depression: relation to demographic and clinical variables, family history, and treatment response. *J Affect Disord*. 1999;55(2):149–57.
 19. Neumeister A, Konstantinidis A, Stastny J, Schwarz MJ, Vitouch O, Willeit M, et al. Association Between Serotonin Transporter Gene Promoter Polymorphism(5HTTLPR) and Behavioral Responses to Tryptophan Depletion in Healthy Women With and Without Family History of Depression. *Arch Gen Psychiatry*. 2002;59(7):613–20.
 20. Monroe SM, Slavich GM, Gotlib IH. Life stress and family history for depression: The moderating role of past depressive episodes. *J Psychiatr Res*. 2014;49:90–5.
 21. Peters JS, Wolper A. Women's Rights, Human Rights: International Feminist Perspectives. Routledge. 2018;383.
 22. Crivello G, Mann G. Young Marriage, Parenthood and Divorce. 2015;36.
 23. Shapero BG, Black SK, Liu RT, Klugman J, Bender RE, Abramson LY, et al. Stressful Life Events and Depression Symptoms: The Effect of Childhood Emotional Abuse on Stress Reactivity. *J Clin Psychol*. 2014;70(3):209–23.
 24. Carpenter LL, Tyrka AR, Ross NS, Khoury L, Anderson GM, Price LH. Effect of Childhood Emotional Abuse and Age on Cortisol Responsivity in Adulthood. *Biol Psychiatry*. 2009;66(1):69–75.
 25. Kaplan MJ, Klinetob NA. Childhood Emotional Trauma and Chronic Posttraumatic Stress Disorder in Adult Outpatients with Treatment-Resistant Depression. *J Nerv Ment Dis*. 2000;188(9):596–601.
 26. Bernet CZ, Stein MB. Relationship of childhood maltreatment to the onset and course of major depression in adulthood. *Depress Anxiety*. 1999;9(4):169–74.
 27. Ryba MM, Hopko DR. Gender Differences in Depression: Assessing Mediational Effects of Overt Behaviors and Environmental Reward through Daily Diary Monitoring. *Depress Res Treat*. 2012;2012:e865679.
 28. Daniel V, Daniel K. Exercises training program: It's Effect on Muscle strength and Activity of daily living among elderly people. *Nursing and Midwifery*. 2020;1(01):19-23.
Available:<https://doi.org/10.52845/NM/2020v1i1a5>
 29. Gariépy G, Honkaniemi H, Quesnel-Vallée A. Social support and protection from depression: systematic review of current findings in Western countries. *Br J Psychiatry*. 2016;209(4):284–93.

30. Milgrom J, Hirshler Y, Reece J, Holt C, Gemmill AW. Social Support—A Protective Factor for Depressed Perinatal Women? *Int J Environ Res Public Health*. 2019;16(8):1426.
31. Rahman A, Iqbal Z, Harrington R. Life events, social support and depression in childbirth: Perspectives from a rural community in the developing world. *Psychol Med*. 2003;33(7):1161–7.
32. Buran T, Sanem Gökçe Merve Kılınc, Elmas Kasap. Prevalence of Extraintestinal Manifestations of Ulcerative Colitis Patients in Turkey: Community-Based Monocentric Observational Study. *Clinical Medicine and Medical Research*. 2020;1(2):39-46. Available:<https://doi.org/10.52845/CMMR/2020v1i2a8>
33. Dumont M, Provost MA. Resilience in Adolescents: Protective Role of Social Support, Coping Strategies, Self-Esteem, and Social Activities on Experience of Stress and Depression. *J Youth Adolesc*. 1999;28(3):343–63.
34. Rapsey CM, Scott KM, Patterson T. Childhood sexual abuse, poly-victimization and internalizing disorders across adulthood and older age: Findings from a 25-year longitudinal study. *J Affect Disord*. 2019;244:171–9.
35. Daniel V, Daniel K. Diabetic neuropathy: new perspectives on early diagnosis and treatments. *Journal of Current Diabetes Reports*. 2020;1(1):12–14. Available:<https://doi.org/10.52845/JCDR/2020v1i1a3>
36. Hailes HP, Yu R, Danese A, Fazel S. Long-term outcomes of childhood sexual abuse: an umbrella review. *Lancet Psychiatry*. 2019;6(10):830–9.
37. Lee H, Kim Y, Terry J. Adverse childhood experiences (ACEs) on mental disorders in young adulthood: Latent classes and community violence exposure. *Prev Med*. 2020;134:106039.
38. Daniel V, Daniel K. Perception of Nurses' Work in Psychiatric Clinic. *Clinical Medicine Insights*. 2020;1(1):27-33. Available:<https://doi.org/10.52845/CMI/2020v1i1a5>
39. Overstreet S. Exposure to Community Violence: Defining the Problem and Understanding the Consequences. *J Child Fam Stud*. 2000;9(1):7–25.

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