



The Impact of Early Childhood Environment on Later Mental Health: A Retrospective Longitudinal Study

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Abstract: Early childhood environments have a big influence on physical, cognitive, and socioemotional development, which in turn affects how people's mental health develops over the course of their lives. Little is known about the impact of the early childhood environment on later-life outcomes, despite its importance. Thus, this study aims to explore the relation between early childhood environment and later mental health outcomes in a sample from Senapati district of Manipur, India. Moreover, this study also unravelled the different issues and challenges which pose as mental health triggers.

The findings of this study indicated a substantial correlation between greater anxiety and depressive symptoms in adulthood and negative childhood experiences, including parental conflict and neglect. On the other hand, favourable mental health outcomes were associated with a nurturing childhood environment that was marked by abuse free, warmth and stability from parents.

Keywords: *Early childhood Environment, Mental health, Adverse Childhood Experiences*

1. Introduction

The early childhood environment plays a critical role in shaping an individual's mental health trajectory (Shonkoff & Phillips, 2000). Prior studies have shown that adverse childhood experiences (ACEs) can have lasting effects on mental health, increasing the risk

of developing depression, anxiety, and other psychiatric disorders (Heim & Nemeroff, 2001). In the context of India, similar observations have been made, where the importance of early childhood environment in shaping later mental health outcomes have been highlighted (Chandra et al., 2018; Kumar et al., 2018).

Research findings consistently suggests that adverse childhood experiences (ACEs), such as parental conflict, neglect, and abuse, can have lasting effects on mental health outcomes (Kessler et al., 2010).

Conversely, research confirms that a nurturing and supportive early childhood environment can foster resilience and promote healthy mental development (Shonkoff & Phillips, 2000). For instance, in a study by Hart and Risley (1995), it is found that children who received sensitive and responsive parenting had better social-emotional development and mental health outcomes.

The impact of early childhood environment on later mental health outcomes can be attributed to various mechanisms. One key mechanism is the development of stress regulation systems, including the hypothalamic-pituitary-adrenal (HPA) axis (Heim et al., 2010). Chronic exposure to adversity in early childhood can disrupt the development of these systems, leading to increased stress sensitivity and vulnerability to mental health disorders.

Furthermore, early childhood experiences can shape the development of brain structures and systems involved in emotional regulation, such as the amygdala and prefrontal cortex (Teicher et al., 2016). This can result to long-lasting consequences for mental health outcomes, including increased risk for anxiety, depression and other mental health issues.

In conclusion, the early childhood environment has a profound impact on later mental health outcomes. A supportive and nurturing environment can promote healthy mental development, while adverse experiences can increase vulnerability to mental health disorders.

1.1 Research questions

1. What is the relationship between early childhood environment and later mental health outcomes?
2. What early childhood environmental factors that predicts later mental health outcomes?

2. Methodology

2.1 Research design

This study employed a retrospective longitudinal design to examine the impact of early childhood environment on later mental health outcomes. This study is both a qualitative and quantitative approach, collecting data through a semi structured interview and survey questionnaire administered to participants. The questionnaire assesses early childhood environment or experiences and later mental health outcomes.

Retrospective longitudinal research design enables to collect information from participants at single point in time but asking them to share on their experiences over a previous period (Menard, 2010). Thus, a retrospective longitudinal design offers a more feasible and time-efficient alternative to prospective longitudinal designs, which demand a prolonged timeframe (Menaghan& Parcel, 1995).

Furthermore, numerous studies have successfully utilized retrospective longitudinal designs to investigate the impact of early childhood environment on later mental health outcomes. For instance, Heim et al. (2010) employed this design to examine the relationship between childhood trauma and depression in adulthood.

2.2 Study Area

This study was conducted in Senapati district, driven by factors including inadequate mental health awareness, lack of research, distinctive cultural and socioeconomic factors and the necessity for tailored interventions.

Senapati is one of the 16 districts of Manipur, India, located in the northern part of the state. The district spans approximately 3,269 square kilometers and is characterized by a rugged terrain, with numerous hills, valleys, and rivers (Singh, 2017). As per the 2011 census, Senapati district's population is approximately 479,859, comprising diverse ethnic groups such as the Mao, Maram, Poumai, and Thangal (Directorate of Census Operations, 2011).

2.3 Sampling strategy

A non- probability sampling strategy was employed, specifically a convenience sampling approach, those participants who are between the age 18-45 and are willing to participate in the study are included for the study.

2.4 Data collections

Data for this study were collected through a comprehensive survey using semi-structure questionnaire and standardized measures to assess various aspects of early childhood environment and later mental health outcomes.

1. Childhood Experience Survey (CES): A 30-item self-report measure is used to assess participants' childhood experiences, including socioeconomic status, parental care, conflict, neglect, abuse, and exposure to other adversity.

2. Semi Structured Interview with 30 questions of Symptom Checklist-90 (SCL-90): From a 90-item self-report measure assessing participants', 30 questions/items are meticulously selected for a semi structured interview to assess current mental health symptoms, including anxiety, depression, satisfaction and wellbeing.

2.5 Operational definitions

In this study, early childhood is defined as the period from birth to age of 14, a crucial stage of rapid physical, cognitive, emotional and social development, a period where children progress from being dependent on caregivers to developing independence and the ability to meet their basic needs.

In this study, Adverse Childhood Experiences (ACEs) refer to potential traumatic events that occur during childhood (before age 14), including abuse, neglect, conflict, household or family disintegration, which can have long-term negative impacts on health and well-being.

In this study, mental health refers to a state of emotional, psychological and social well-being, which capacitates individuals to navigate life's challenges and build meaningful relationships.

2.6 Ethical considerations

The researcher obtained explicit consent from each participant, ensuring they were fully aware of the study's procedures and implications. Participation was voluntary, and to maintain the trust and privacy of the participants, all data collected was anonymized and kept confidential.

3. Findings and results

3.1 Common challenges in early childhood: mental health triggers

Mental health is a fundamental aspect of overall well-being, and numerous factors can impact it. Experiencing adversity and traumatic events in childhood can profoundly impact mental health, contributing to issues and conditions such as anxiety, depression, and post-traumatic stress disorder (PTSD) (Felitti et al., 1998). Managing ACEs and developing resilience are critical challenges.

1. **Parental discord/ conflict:** Children's mental health and overall wellbeing are put at great risk when parents are in conflict. Financial strain, substance abuse, communication issues are the most common underlying causes of parental conflict. Those children exposed to parental conflict/discord experiences mental health issues such as anxiety, depression, and behavioral problems. Parental conflict/discord can influence social interactions, potentially limiting children's social opportunities. Children's mental health can be significantly influenced by their Parents' mental health struggles. Parents struggling with mental health issues as an outcome of discord/conflict may have inconsistent parenting style and may be less emotionally available for their children, which in turn affects children's sense of safety and security. Therefore, managing parental mental health and developing healthy communication skills and conflict management are key to manage disagreement and resolve parental conflicts.
2. **Trauma:** Traumatic experiences such as parental divorce/ separation, physical, verbal or emotional abuse, witnessing domestic violence, neglect, loss of loved ones, can lead to mental health issues. To process and cope with traumatic experiences, support from family and mental health professionals are vital.
3. **Poverty and socioeconomic disadvantage:** Poverty and socioeconomic disadvantage significantly affect children's wellbeing and development. Living in poverty can limit opportunities for academic success and social interaction leading to social isolation, low self-esteem, anxiety, and behavioural problems such as aggression or withdrawal. It is vital to create a supportive environment and foster resilience as it can make a significant difference.

Results

This study reveals that, out of 50 participants, 62% (31) of the participants had experienced at least one type of ACE before age 14, 18% (9) of the participants had experienced at least 4 or more types of ACE and 38% (19) of the participants had never experienced any of the listed type of ACE before age 14.

ACEs that were most common among the participants are: Parents substance abuse (alcoholics) -12, Parental conflict/discord-19, Emotional/verbal abuse (insult/neglect) -11,

Divorce/separation of parents at least once- 9, Poverty or socioeconomic problem-8, Death of parents/parent-8, Physical abuse-3.

3.2 Common challenges in adulthood: mental health triggers

Social Media

Social media can significantly contribute to stress, anxiety, and depression, particularly if individuals compare themselves to others' curated online profiles which can be unrealistic (Király et al., 2019). To minimize and mitigate social media's negative impacts on mental health, setting boundaries around social media use, such as limiting screen time or taking regular breaks from social media can be helpful (Best et al., 2014).

Financial Stress

Financial stress can lead to anxiety, depression, and other mental health issues (Kim et al., 2018). To manage financial stress and develop healthy financial habits, create a budget, prioritize needs over wants, and seek support from financial advisors or therapists (Taylor et al., 2017).

Relationship Issues

Relationship issues, such as conflict or neglect, can lead to mental health problems like depression and anxiety (Whisman et al., 2018). To manage relationship conflicts and develop healthy communication skills, practice active listening, express emotions effectively, and seek couples therapy if needed (Gilliland & Dunn, 2003).

Academic Pressure

Academic pressure can lead to stress, anxiety, and depression in students (Hales et al., 2018). To manage academic workload and develop healthy study habits, break down study material into manageable chunks, practice time management, and seek support from teachers or mentors (Bandura et al., 2011).

Workplace Stress

Workplace stress can lead to mental health issues like burnout, anxiety, and depression (Demerouti et al., 2018). To manage workplace stress and develop healthy work habits, it is essential to prioritize tasks, take regular breaks, and seek support from colleagues or supervisors (Eisenberger et al., 2018).

Trauma

Any abusive incidents or similar traumatic situations can easily trigger trauma in individuals who have had ACEs or have been traumatized in their childhood. Re-

traumatization can be a very challenging experience which can seriously affect mental health. Being aware of potential triggers can help prevent re-traumatization.

Results

This study reveals that ACEs have negative effects on health and wellbeing in childhood (attention, decision making and learning) and has lasting effect in adulthood as well. These experiences increase the risks of developing healthy and stable relationships/ and difficult to settle in life. This study shows that from among those who have experienced ACEs, 38.71% (12 out of 31) participants are either divorced or separated from their spouse at least once, 61.29% (19 out of 31) suffers from mental health issues.

Interestingly, this study also shows that 22.58%(7 out of 31) participants, despite having experienced ACEs have positive self-image, 38.71 % (12 out of 31) have good coping skills.

The factors contributing to their resilience are

Having supportive family, friends or teachers, developing coping skills/ navigating the negative experience into something healthy and productive whether through work, relationships, hobbies, helps them mitigate the effects of ACEs.

On the other hand, 57.89% (11 out of 19) of the participants who had never experienced ACEs have positive self-image/esteem. 42.11% (8 out of 19) have coping skills. 21.05% (4 out of 19) participants are either divorced or separated from their spouse at least once. Undeniably, mental health issues also persist in individuals who are not affected by ACEs, by 21.05% (4 out of 19).

3.3 Regulation Strategies

1. Supportive Environment: Providing a supportive environment can help mitigate the impact of ACEs (Bradley et al., 2017).

2. Therapy and Counseling: Engaging in therapy or counseling can help individuals develop coping strategies and process traumatic experiences (Hinduja & Patchin, 2018).

3. Self-Care: Practicing self-care, such as exercise, mindfulness, and relaxation techniques, can help reduce stress and promote resilience (Gilliland & Dunn, 2003).

4. Discussion and recommendations

This study highlights the crucial role of early childhood environment in determining later mental health outcomes. The findings suggest that adverse childhood experiences, such

as parental discord/conflict, abuse and neglect, can have lasting effects on mental health, increasing the risk of developing anxiety, depression, relationship/ attachment issues at home or at workplace. Conversely, a supportive childhood environment characterized by abuse free home environment, parental warmth/care and stability can foster healthy development and mitigate the risk of mental health problems.

Despite the high prevalence of ACEs, none of the participants have received or availed any mental health intervention services. Interestingly, even the few participants who were aware of mental health services cited social media as their sole source of information about mental health.

The participants clearly emphasized on the importance and need of early intervention and support and community-based initiatives to address ACEs. Hence, the following recommendations:

1. Early intervention programs: Implement early intervention programs aimed at promoting healthy childhood development and mitigating the risk of mental health problems.
2. Parenting programs: Develop parenting programs that promote parental warmth, stability, and responsiveness.
3. Mental health services: Provide accessible mental health services for children and adults who have experienced adverse childhood experiences.

4.1 Limitations

This study was conducted in Senapati district, where only 50 participants were selected for the study. Since the study employed a retrospective design and the study relied on self-report measures, which may be subject to biases and shortcomings.

This study has a relatively small sample, which may impact the generalizability of the findings and potentially limit the detection of significant differences between groups. However, the findings of the study are applicable for generalize understanding of the relationship between early childhood environment and later mental health. Another inevitable limitation is complexity of mental health: mental health outcomes are influenced by multiple factors, making it challenging to pinpoint a single percentage rate.

5. Conclusions

This study highlights the importance of early childhood environment in shaping later mental health outcomes. It also shows that, mental health issue can impact individuals from

all walks of life, regardless of their childhood environment or upbringing however Childhood adversity can increase the risk of developing mental health conditions with long-term effects. The findings emphasize the need for early intervention and prevention strategies which aimed at promoting healthy childhood development and mitigating the risk of mental health problems at any point of time/stage of life. Irrespective of whether mental health intervention services are available or not, community-initiatives is key for addressing ACEs by enhancing accessibility; promote mental health and wellbeing, and preventing ACEs recurrence.

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