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THE IMPACT OF EARLY INSTITUTIONALIZATION AND NEGLECT ON EMOTION REGULATION IN MOTHERHOOD: EXAMINING LONG-TERM EFFECTS ON WOMEN'S MATERNAL ROLES

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Abstract

Childhood neglect and institutionalization are known to adversely affect emotional, cognitive, and social development. This study examines whether these early experiences influence emotion regulation and facial expression recognition in women transitioning to motherhood, both critical aspects of parenting. The sample included 44 women, 14 institutionalized mothers with young children, and 30 non-institutionalized participants. Participants completed an emotion regulation task using Ekman's facial expression photographs, a working memory distraction task, and the Emotion Regulation Questionnaire (ERQ). Data collection was conducted online due to COVID-19, with analysis via one-way ANOVA showing no significant differences between the groups in emotion regulation or facial expression recognition. These findings suggest that early institutionalization and neglect may not directly impair emotion regulation relevant to motherhood. However, the study's small sample size, reliance on self-report measures, and limited ecological validity of tools likely constrained the results. Future research should address these limitations by using larger, diverse samples and exploring additional factors like attachment styles and parenting practices. While findings were inconclusive, the study underscores the importance of early interventions targeting emotion regulation and resilience in individuals exposed to neglect. Clinical and systemic efforts can mitigate the long-term effects of early adversity, supporting healthier outcomes for affected individuals and their children.

Keywords: *Childhood neglect, institutionalization, emotion regulation, motherhood*.

1. Introduction

Child neglect poses a significant impact on children's development and future, and it is related to a number of adverse physical and mental health effects that impact the individual over the lifespan and place a major burden on both victims and the community as a whole (Leeb et al., 2011). The early years of a child's life are essential for their physical and mental development. As outlined in the United Nations Convention on the Rights of the Child, every child is entitled to the rights to life, survival, and development, as well as protection from all forms of physical and psychological violence. Despite this, millions of children worldwide experience or witness physical, sexual, and emotional violence daily, often suffering abuse during their formative years and beyond. This mistreatment can occur within their families, immediate surroundings, or at the hands of caregivers in childcare institutions. Research has consistently shown that any form of child abuse is linked to long-term physical, psychological, and emotional challenges. Moreover, the effects of such maltreatment have been associated with lifelong consequences (Damaskopoulou et al., 2022).

Child neglect, defined as failing to meet a child's basic needs like food, shelter, or medical care, significantly affects development and well-being (Fanetti et al., 2014). Gaudin (1993) categorized neglect into physical, medical, emotional, and educational. Physical neglect leads to health and cognitive issues, while medical neglect, though distinct from poverty-related inaccessibility, causes lifelong medical problems. Educational neglect disrupts emotional and social development, and emotional neglect, often hidden, impairs emotional growth through rejection or isolation (Fanetti et al., 2014). The consequences of neglect extend beyond childhood. Maternal neglect in early years triggers epigenetic changes affecting stress regulation, with long-term mental and physical health effects (Naumova et al., 2019). Globally, 16% of children report neglect, often linked with aggression, poor educational outcomes, and mental health issues in later life (WHO, 2022; Felitti et al., 2019).

Building on these challenges, institutional care exacerbates developmental issues. Children in institutional settings face "structural neglect," including inadequate resources and limited emotional interactions (van IJzendoorn et al., 2011). This environment delays physical growth, lowers IQ (average of 84), and impairs emotional development (van IJzendoorn & Bakermans-Kranenburg, 2017). Prolonged stays worsen attachment issues and behavioral problems, with heightened risks of criminality and mental health challenges (Côté et al., 2018). Studies on Romanian institutions also revealed significant brain development delays (Beckett et al., 2010).

Emotion regulation, a critical skill developed in early years, is deeply impacted by neglect and institutionalization. Neglected children lack parental guidance for managing emotions, leading to difficulties in recognizing emotional cues and developing healthy relationships (Young & Widom, 2014). Parental stress and mental health issues further heighten these risks, impairing caregiving capacity and emotional development (Turner & Rogers, 2012). Working memory, essential for managing information, plays a key role in emotion regulation. Higher working memory capacity enhances emotional control and reduces negative emotional responses (Schmeichel & Demaree, 2010). Training working memory improves regulation skills, suggesting its potential for aiding neglected children in overcoming emotional challenges (Xiu et al., 2016).

Child neglect and institutional care have profound, long-lasting effects on physical, cognitive, and emotional development. By addressing institutional shortcomings, supporting caregivers, and utilizing interventions like working memory training, we can mitigate the devastating impacts of neglect and foster better outcomes for affected children. The aim of this study is to access whether being institutionalized and neglected in childhood affects emotion regulation strategies when comes to their children in adulthood. The first hypothesis of the study is that being institutionalized and neglected in early age affects women's emotion regulation of her role as a mother. The second hypothesis is that these women will have difficulties in identifying and interpreting facial expressions.

2. Method

2.1. Participants

Participants were recruited from two private institutions who were 14 mothers with small children till 3 years old. Moreover, we found 30 more participants for the neglect questionnaire from outside the specific institutions. All participants received a small gift in return for participation in the study. The procedure was approved by the ethical committee of Ankara Yildirim Beyazit University.

2.2. Material

The data will be collected online due to COVID-19 situation and through the help of social workers working in the institution.

2.3. Measures

Emotional regulation task

The emotion regulation task will include attention deployment with cognitive reappraisal, where it will be shown positive/negative photographs, and the participants will be asked to identify the facial expressions. For the emotion regulation task, the photographs from Paul Ekman's book "unmasking the face" is presented in Power Point Presentation with an interval of 5-7 seconds. In between the emotional regulation task and questionnaires there will be a small working memory task for distraction consisting of items that have to be remembered and afterwards recalled. The duration of the study is between 3 to 5 minutes. The scores were calculated by using SPPS (Statistical Package for the Social Sciences). Higher scores refer to the ability of identifying the facial expressions, and on the contrary lower scores stands for the inability to recognize the expressions in the expected way.

2.4. Questionnaires

After completing the emotion regulation task, the participants will be asked to fill out a questionnaire.

2.4.1. Emotion Regulation Questionnaire (ERQ). The Emotion Regulation Questionnaire (ERQ), developed by Gross and John (2003), assesses emotion regulation strategies through **Cognitive Reappraisal** and **Expressive Suppression**, using 10 items rated on a 7-point scale (1 = strongly disagree to 7 = strongly agree). The Bulgarian adaptation by Yavor Vasilev (2017) demonstrated satisfactory psychometric properties, with an overall internal consistency of $\alpha = 0.72$ and subscale reliabilities of 0.73. Test-retest reliability after three months was 0.69. Gender differences were observed: men scored higher

on Suppression (3.64 vs. 3.14 for women), while no significant gender differences were found for Reappraisal (4.60 for men, 4.61 for women). The scoring comprises **Cognitive Reappraisal Items** (1, 3, 5, 7, 8, 10) and **Expressive Suppression Items** (2, 4, 6, 9), with no reverse-scored items. Maintaining item order is essential to preserve scale integrity. This Bulgarian ERQ is a reliable tool for studying emotion regulation strategies in Bulgarian-speaking populations, supporting research on emotional processes and mental health.

2.5. Procedure

At the beginning of the experiment, the participant will be provided with an informed consent and information sheet in their native language (i.e., Bulgarian). Before signing the informed consent sheet, the experimenter will briefly explain the aim of the study and their rights as a participant. After participants provided consent, the experimenter starts the experiment. After, an emotion regulation task was given, which included attention deployment with cognitive reappraisal, where we will show positive and negative photographs in a Power Point Presentation with an interval of 5-7 seconds. The participants were asked to identify the required facial expressions and the related emotions. Between the emotion regulation task and the ERQ there was a working memory task for distracting consisting of items that have to be remembered and afterwards recalled. The distraction task results were not calculated because it was provided only for break between the task and the questionnaire. Finally, the ERQ will be given to the participants. After finishing the experiment, the participants will be informed that they can contact the researcher in case of further questions.

3. Results

A one-way ANOVA was conducted to examine the effect of early institutionalization and neglect on women's emotion regulation in their maternal roles. Separate analyses were performed for different groups. The results of the statistical analysis did not support the hypothesis that early neglect, whether institutional or non-institutional, significantly affects women’s emotion regulation in their maternal roles as measured by the facial expression task.

First, for participants who experienced neglect within institutions, the analysis revealed no significant differences in emotion regulation, $F(4, 2) = 3.443$, MSE = 4.304, $p = .238$, partial $\eta^2 = 0.873$, and power = 0.202. Second, for participants who experienced neglect outside institutions, divided into low and high neglect frequency groups, the results were also not significant, $F(4, 6) = 3.449$, MSE = 8.048, $p = .122$. Lastly, a comparison between institutional and non-institutional neglect groups showed no significant differences, $F(5, 8) = 2.057$, MSE = 0.386, $p = .174$, partial $\eta^2 = 0.562$, and power = 0.404. In summary, no significant findings emerged from the analyses, and the low statistical power across tests suggests that the sample size may have been insufficient to detect meaningful effects.

4. Discussion

This study aimed to explore whether early experiences of neglect, both institutional and non-institutional, influence women’s emotion regulation in maternal roles and their ability to interpret facial expressions. Previous literature consistently highlights the long-term negative effects of neglect on emotional, cognitive, and social development (Naumova et al., 2019; Young & Widom, 2014). However, the findings did not support the hypotheses, as no significant differences were observed between the groups studied. This invites consideration of potential explanations and implications, suggesting that the effects of early neglect may be more complex or mediated by other factors.

One possible explanation is the moderating role of working memory, a critical component of emotion regulation (Schmeichel & Demaree, 2010; Xiu et al., 2016). Working memory might influence how individuals process and manage emotional experiences, which could mitigate the long-term impacts of neglect. Future research should examine the interplay between early adversity, cognitive mechanisms like working memory, and emotional outcomes. The results also raise questions about the role of resilience, social support, and access to therapeutic interventions in shaping developmental outcomes. It is possible that these protective factors enabled participants to overcome or compensate for early emotional deficits, particularly in their maternal roles. Research has demonstrated that neglect, especially in institutional settings, disrupts caregiver-child interactions critical for the development of emotion regulation strategies (IOM & NRC, 2014). Despite this, some individuals demonstrate remarkable resilience, which may explain the lack of significant findings in this study. Positive experiences following neglect, including access to supportive relationships and therapy, may reduce its long-term consequences (Masten, 2018; Dozier et al., 2006). Furthermore, the complexity of emotion regulation as a construct might have influenced the results.

The use of a facial expression task, which provides a narrow view of emotion regulation, may not fully capture its multifaceted nature. Broader assessments incorporating physiological measures or observational analyses could offer deeper insights into how early neglect impacts emotional functioning in adulthood.

The study's methodological limitations further warrant consideration. A relatively small sample size, particularly in the institutional neglect subgroup, reduced the statistical power to detect significant differences and limited the generalizability of the findings. Future studies should aim to include larger and more diverse samples to uncover meaningful differences. Additionally, the study employed a one-way ANOVA design, which restricted the ability to explore complex interactions between variables such as the type and duration of neglect, institutional care experiences, and socio-economic factors. Advanced statistical methods like structural equation modeling could provide a more nuanced understanding of these relationships. Another limitation was the reliance on Ekman's photographs for the emotion recognition task, which depict universal emotions but may lack the subtleties or culturally specific expressions relevant to maternal interactions. Incorporating culturally sensitive stimuli could improve the ecological validity of future studies. Furthermore, the diversity within the non-institutionalized group in terms of socio-demographic characteristics may have complicated comparisons. Future research should aim for greater homogeneity within groups or apply stratification measures to address these differences. Retrospective self-reports were another limitation, as they are prone to biases such as social desirability and memory distortion. Employing multi-method approaches, including observational assessments or third-party reports, could enhance the reliability of data on childhood neglect and current emotion regulation strategies. These methodological improvements are essential for future research to provide clearer insights into the long-term effects of neglect.

Despite the lack of significant findings, this study has several important clinical implications. Early intervention remains critical in mitigating the adverse effects of neglect on emotional development. Evidence-based approaches, such as attachment-focused therapies and trauma-informed cognitive-behavioral interventions, can support children exposed to neglect or institutional care. These programs can help build emotional resilience and reduce the psychological burden of early adverse experiences. Cognitive training programs targeting working memory could also indirectly improve emotion regulation capabilities, equipping individuals to better manage stress and navigate emotional challenges. For women with histories of neglect or institutionalization, therapeutic approaches that address both past trauma and current parenting challenges are essential. Psychoeducation on the effects of early neglect and strategies for enhancing emotion regulation can empower these women to foster healthy relationships with their children. Parenting programs tailored to their unique needs could focus on building maternal self-efficacy and emotional understanding, promoting positive outcomes for both mothers and their children. Finally, systemic reforms in institutional care settings are necessary to address structural neglect. Policymakers and stakeholders should prioritize creating nurturing environments that provide emotional and cognitive support for children in care. Ensuring adequate resources and consistent caregiving within these settings can reduce the long-term effects of neglect and improve developmental trajectories.

In conclusion, this study explored the complex relationships between early neglect, institutionalization, and emotion regulation. While the findings were not statistically significant, they highlight the intricate interplay of factors influencing emotional outcomes and the need for nuanced, comprehensive research. Addressing limitations such as small sample sizes, cultural considerations in assessment tools, and the reliance on narrow emotion recognition measures will strengthen future studies. Clinically, the findings underscore the importance of early intervention, resilience-building programs, and systemic changes in care settings to mitigate the effects of early adversity. By addressing these challenges through research, clinical practice, and policy, we can better support individuals affected by neglect and promote healthier developmental outcomes across the lifespan.

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