



ISSN: 0975-833X

Available online at <http://www.journalcra.com>

International Journal of Current Research
Vol. 10, Issue, 05, pp.69047-69055, May, 2018

INTERNATIONAL JOURNAL
OF CURRENT RESEARCH

RESEARCH ARTICLE

RELATIONSHIP OF EARLY CHILDHOOD NEGLECT AND ABUSE WITH EMOTION REGULATION AND EMOTION RECOGNITION IN ADOLESCENTS

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ARTICLE INFO

Article History:

Received 22nd February, 2018
Received in revised form
18th March, 2018
Accepted 20th April, 2018
Published online 23rd May, 2018

Key words:

Childhood Neglect and Abuse,
Emotion Regulation,
Emotion Recognition.

ABSTRACT

Background: Different patterns of childhood neglect and abuse are related with the level of seriousness of mental issue in adulthood. An investigation of this nature is essential to understand developmental trajectory of neglect and abuse and to base any intervention plan for affected individuals and to build up a risk alleviating techniques as primary prevention.

Aim: To examine relationship of Childhood Neglect and Abuse with Emotion Regulation and Emotional Recognition in adolescents.

Method: A purposive sample of 140 children studying in English and Hindi medium schools located in Delhi and NCR region (India) was taken to test the hypotheses. Willing individuals of age range from 16 to 18 years of either sex were administered a set of self-administered questionnaires, viz., General Health Questionnaire (GHQ), Toronto Alexithymia Scale (TAS), Difficulties in Emotion Regulation Scale (DERS) and The Childhood Experience of Care and Abuse Questionnaire (CECA) for collecting the data.

Results: The analysis indicated that GHQ cut-off score did not differ significantly on any of the study variables; and the examined constructs (sexual abuse, physical abuse, parental loss with difficult in emotion regulation and neglect, physical abuse with alexithymia) were positively correlated with Difficulty as measured on Emotion Regulation Scale and Toronto Alexithymia Scale. Results also indicated that sexual abuse and physical abuse were significantly predicting difficulty in emotion regulation ($R^2 = 0.38$, $p = 0.01$) and alexithymia ($R^2 = 0.35$, $p = 0.01$).

Conclusions: Deficits in emotion regulation and emotion recognition were ubiquitous in children reporting of adverse childhood experience such as neglect and abuse. Sexual and physical abuse emerged as significant variables, accounting for maximum variance in criterion variables viz. emotion regulation and recognition.

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Citation: Rashi Juneja and Singh, D. C., 2018. "Relationship of early childhood neglect and abuse with emotion regulation and emotion recognition in adolescents", *International Journal of Current Research*, 10, (05), 69047-69055.

INTRODUCTION

The World Health Organisation (1999) has defined 'Child Abuse' as a violation of basic human rights of a child, constituting all forms of emotional ill treatment, physical, sexual harm, negligent treatment or neglect and other exploitation resulting in potential or actual harm to the child's survival, health, development and dignity, in the context of a relationship of trust, responsibility or power. 'Child Neglect' is expressed to happen when there is failure of a parent/guardian to provide for the development of the child, when they are in a position to do so (where resources available to the family or care giver; distinguished from poverty). Mostly neglect occurs in one or more area such as: health, education, emotional development, nutrition and shelter.

Child Neglect and Abuse are a worldwide public health and social problems which apply a multitude of short term and long term effects on children. The result of children's exposure to maltreatment incorporates elevated levels of aggression, post-traumatic stress disorder, emotional and mental health concerns, such as depression and anxiety. One of the most common effects of childhood abuse is difficulty in understanding and regulating emotions in later life, which are prominent characteristics of personality disorders. The association between exposure to interpersonal trauma and personality disorders is one that has received substantial attention (Bornovalova *et al.*, 2006; Shipman *et al.*, 2007). Individuals with severe, disabling personality disorders, viz, borderline, schizotypal and paranoid report significantly more interpersonal trauma and childhood physical abuse than those with other types of personality disorders. Particularly, adults with borderline personality disorder and paranoid personality disorder have the highest rates of exposure to trauma (especially childhood sexual trauma), high rates of PTSD, and

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younger age at first exposure to trauma. There is also an association between childhood trauma by primary care giver and emotional dysregulation in adults with borderline personality disorder (Yen *et al.*, 2000; Golier *et al.*, 2003). Persisting physical health and mental health problems are a common consequence of child abuse and neglect in adults (Cohen *et al.*, 2000; Springer *et al.*, 2007; Wegman and Stetler, 2009; Cannon *et al.*, 2010). Different patterns of childhood abuse and neglect are associated with the degree of severity of mental disorders in adulthood. However, relationship between childhood abuse and neglect, and the primary determinants of personality disorders such as emotional dysregulation and emotional recognition have not been studied in normal school going population. A study of this nature is important to understand developmental trajectory of abuse and neglect and to base any intervention plan for affected population and to develop a risk mitigating strategies as primary prevention. Thus, the present study was undertaken to see the relationship of Childhood Neglect and Abuse with Emotion Regulation and Emotion Recognition in school going individuals. It was thought that the findings of the study would help in understanding the causation of emotional dysregulation in children and primary intervention strategies, which may aid in reducing the prevalence of mental disorders of childhood as well adulthood.

Childhood Neglect and Abuse

As the greater part of adult psychological well-being and mental health starts in childhood and puberty. Childhood experiences lay the basis for what will be our general attachment style throughout our lives, how we bond with someone else, as well as how we respond or react emotionally. It is important to understand early experiences in order to make sense of why a child might be behaving in a certain way, having trouble managing his/her emotions, reacting to some things in a particular manner, seeming very sensitive, struggling with peer relationships, experiencing anxiety etc. Experiences can be positive or negative in nature and both contribute equally in making up personality of a child. Especially traumatic childhood experiences, like physical, emotional, or sexual abuse and neglect, have been identified as risk factors that increase the likelihood a personality disorder may develop (Johnson *et al.*, 2005). Researches indicate that a history of child abuse is associated with greater risk for mental health problems in adulthood. Abuse and neglect cause a negative effect on emotional, social, behavioural, scholastic, and physical wellbeing all through life. Abused children are 300% more prone to abuse drugs, self-harm, and act brutally than their non-abuse peers. They additionally exhibit language and learning delays. Truth be told, the brain of an abused and/or neglected child can, now and again, be 20% smaller than his or her non-abused counterparts. Complex processes in the growing brain depend intensely on nurturing and supportive interactions with the primary caregiver. At the point when these procedures fail, any number of emotional, behavioural, learning and perception issues can emerge all through life (American Association for Marriage and Family Therapy, 2002-2017).

Possible causes of Neglect and Abuse

The most common causes of child maltreatment were family structure and size, poverty, alcohol and substance abuse, domestic violence, and community violence are contributing factors to child abuse and neglect (Third National Incidence

Study of Child Abuse and Neglect, 1993). While these and different variables affect the probability of child abuse, they do not necessarily lead to abuse. Understanding the reasons for child abuse and the attributes of families in which child maltreatment happens are the only indicators. Most guardians, even in the most unpleasant and demanding circumstances, and even with a personal history may incline them to be more violent than guardians without such a history, do not abuse their children. Some of the most common causes for child neglect and abuse were found to be poverty, poor social skills and unloving relationships, substance abuse, depression, large family, lack of support for single-parent households and misconceptions about child development and lack of empathy. At the individual level, factors like age, sex, personal history and while at the level of society, factors leading to child maltreatment are encouraging harsh physical punishment, cultural norms, lack of social safety nets and economic inequality (WHO, 2007).

Situations of Childhood Abuse and Neglect

Studies with the Childhood Experience of Care and Abuse (CECA) show that maternal neglect and abuse identifying to internalizing disorders (e.g., anxiety, depression) and paternal neglect/abuse to externalizing disorder (e.g., conduct disorder, substance use disorder, antisocial personality disorder) (Bifulco *et al.*, 2014). In a large prospective study of court-substantiated cases of abuse and neglect, 26% of abused and neglected adolescents were antisocial. Likewise, there is plentiful proof that conduct problems are related to hostile, critical, punitive and coercive child rearing (Rutter *et al.*, 1998). In one long-term study, as many as 80% of young adults who had been abused met the diagnostic criteria for at least one psychiatric disorder at age 21 and these young adults exhibited many problems, including depression, anxiety, eating disorders, and suicide attempts (Silverman *et al.*, 1996). In another research, neglect is the kind of child maltreatment most likely to re-occur in a family even after child protective services intervention.

Study likewise finds that the more chronic or repeating neglect is in a family, the more probable that children in that family have been physically or sexually abused too. Researches propose that there are various characteristics of sexually and physically abusive encounters that are prescient of more noteworthy mental health, social and behavioural issues - more intrusive sexual behaviour particularly sexual penetration, concomitant physical injury, concomitant physical violence, cognitive appraisal of life threat or serious injury, psychological abuse, closer relationship to the offender, longer duration of abuse incidents, higher frequency of abuse incidents, less maternal support, less sibling support, less community support, gender (male victims seem to have greater difficulties), multiple perpetrators, disturbed family relationships and family conflict, ADHD, aggression, anxiety, cognitive/ intellectual impairments, conduct disorder, depression, negative parent-child interactions, neurological impairment, poor interpersonal relationships/social skills, self-injurious behaviour, social/interpersonal difficulties, substance-related disorders, suicidal thoughts/behaviours, trauma-related problems/PTSD, violent/criminal behaviour. Students may be at risk for developing a disorder or for having problematic interpersonal relationships (Shipman *et al.*, 2007). For instance, problems in directing or regulating negative emotions or feelings related to internalizing disorders such as

anxiety and/or depression, and difficulty with a negative emotion such as anger may be related to externalizing disorders or “acting out” (Gross, 1998). A child's initial home environment profoundly affects his wellbeing. Starting in early stages, a problematic home environment can disturb the brain's stress response system; decrease the nature of caregiving a child receives, and meddles with healthy development and advancement. Research has linked negative home environment amid children's initial three years with a large group of developmental problems, including 1. Poor language development by age three. 2. Later behaviour problems. 3. Deficits in school readiness. 4. Aggression, anxiety and depression. 5. Impaired cognitive development at age three. Researches have provided extensive evidence for the association between self-harm and childhood sexual abuse, physical abuse, neglect and emotional abuse (Madge et al, 2011; Wan et al, 2015). If the impact of child abuse and neglect on emotion processing extends into adulthood, what may be some of components that prompt to these results? Researches progressively demonstrated that childhood abuse and neglect results over numerous spaces of working (Widom, 2000; Gilbert, 2009) that may clarify an expanded risk for deficiencies in feeling emotion processing abilities for people with histories of child abuse and/or neglect and it's not restricted to themselves but others' emotions too.

Neglect was observed to have a negative effect on children's physical, social/behavioural, intellectual and emotional development. Studies have also found a negative relationship between child abuse and the ability to understand others' emotions, especially positive emotions (Koizumi and Takagishi, 2014). In particular, child abuse and neglect has been related with cognitive deficits in general and various forms of psychopathology that may lead to emotion processing deficits. The experience of child abuse shifts from person to person. Intensity, severity, and frequency, age of the child, connection between the child and culprit, level of support from non-affronting parents, level of affirmation by the culprit, nature of family working, functioning, degree of brutality, and particular nature of the abuse all influence the type and severity of impacts found in the child victim. Childhood abuse and neglect have been strongly involved as risk factors in the advancement of personality disorders as well. Amongst the well-known impacts of childhood abuse is trouble in understanding and regulating emotions in later life, which are noticeable characteristics of personality disorder (Bornovalova et al, 2006; Shipman et al, 2007). People with serious, impairing personality disorder including borderline, schizotypal, and paranoid report altogether more childhood physical abuse and trauma compared to other personality disorders, especially, individuals with borderline and paranoid personality disorder have the most elevated rates of exposure to abuse and trauma (specifically child sexual abuse).

Effects of Childhood Neglect and Abuse on Emotion Regulation and Recognition

Evidence for a significant relationship between the ability to effectively regulate undesired affective states and mental health has been found crosswise over every single mental disorder incorporated into the Diagnostic and Statistical Manual for Mental Disorders (DSM-5) (APA, 2013). Problem of regulating emotions is found in various psychiatric disorders like depression, post-traumatic stress disorder (PTSD) and generalized anxiety disorder. Whereas research on clinical samples also indicates that individuals meeting criteria for

panic disorder, social anxiety, PTSD, borderline personality and eating disorder report difficulties identifying, labelling, accepting, and tolerating unwanted emotions (Baker *et al.*, 2004; Turk *et al.*, 2009). Multiple longitudinal studies, negative affect predicted desire to drink future (Berking *et al.*, 2011). Most of the early on BPD reported deficits in emotion recognition, particularly in the identification of negative emotions (Fenske *et al.*, 2015). Researches have also that there is an interlinked relationship between child abuse and borderline personality disorder (BPD). Individuals with BPD report high rates of childhood sexual, emotional and/or physical abuse (Bornovalova et al, 2006). Studies of maltreating parents indicate less positive emotions and more negative emotions than non-abusive parents (Kavanagh, 1988). Theories in regards to the aetiology and treatment of neglect accentuate the significance of the connections between the individual, family, and community.

A child who gets conflicting or unforgiving caregiving experiences face issues anticipating the results of his/her behavior (Dadds and Salmon, 2003) and this might be show in shortfalls in processing emotional information. Child abuse and neglect can have a huge number of long term consequences for physical wellbeing, Psychological Consequences, Behavioural Consequences and Societal Consequences which includes impaired brain development, abusive head trauma, poor physical health, poor mental and emotional health, cognitive difficulties, social difficulties, difficulties during adolescents, juvenile delinquency, drug abuse, abusive behaviours, direct and indirect costs, prevention strategies, support system and taboo (Child Welfare Information Gateway, 2013). Numerous childhood disorders involve troubles with emotion regulation. Emotional dysregulation is a significant marker for both externalizing and internalizing disorders. The idea of externalizing disorders alludes to conduct or disruptive disorders, whereas internalizing disorders alludes to mood disorders or emotional problems (Gjone and Stevenson, 1997; Martin, 2003). Unintentionally, Deborde *et al.* (2015) found a relationship between emotional neglect in childhood and the conduct disorder severity.

However, what type of neglect lead to these results was not investigated. Children who have suffered abuse often have difficulty identifying and labelling the emotions they are experiencing beyond ‘mad, sad, bad’, have difficulties managing their emotions, particularly de-escalating from distress, have difficulty expressing their emotions in appropriate ways, e.g., fear or anxiety expressed as aggressive outbursts, fear speaking about or even showing their emotions. Their life experiences may have taught them it is unsafe to do so, e.g., they may have been told by a parent / carer when upset ‘I'll give you something to cry about’. Children can be triggered into reliving these overwhelming experiences by any number of sensory cues; smell of cologne, tone of voice, a type of touch. Reactions to triggers can be unpredictable and difficult to manage. Common reactions may include aggressive outbursts or verbal or physical aggression towards self or others, fleeing the situation and withdrawal and dissociation. Therefore, exposure to traumatic events and interpersonal trauma in childhood appears to be related with a wide range of psychosocial, developmental, and therapeutic impedances in children, adolescents and adults, with emotional dysregulation being a centre element that may help to account for this heightened risk. With a specific end goal to understand how

childhood neglect and abuse contribute to emotional dysregulation and recognition. Hence, present research has been envisaged to understand “Early childhood neglect and abuse and their relationship with emotion regulation and recognition in children”.

MATERIALS AND METHODS

Aim: To examine the relationship of Childhood Neglect and Abuse with Emotion Regulation and Emotional Recognition in adolescents between 16 and 18 years of age of either sex.

Hypotheses

H1: There will be significant correlation of variables of Childhood Neglect and Abuse with Emotion Regulation in adolescents of 16-18 yr. of age.

H2: There will be significant correlation of variables of Childhood Neglect and Abuse with Emotion Recognition in adolescents of 16-18 yr. of age.

Research design: Single group design.

Sample and Sampling

Children studying in English and Hindi medium schools located in Delhi and NCR regions comprised the study sample. A total of 140 children of either sex, meeting the study criteria were recruited for the study. Purposive sampling method was employed in the present study.

Inclusion criteria

- Age 16 – 18 years of either sex,
- Able to read and write in English, and
- Consented (through school authorities) to take part in the research.

Exclusion criteria

- Current or past history of any psychiatric illness and treatment for the same, and
- History of intellectual impairment or any other disabling conditions such as sensory or motor impairments.

Measures

General Health Questionnaire (GHQ) (Goldberg and Williams, 1988)

GHQ was originally developed by Goldberg (1978) and has been widely used as a screening tool to determine whether an individual is at risk of developing psychiatric disorder (Goldberg and Williams, 1988). The GHQ was originally designed to be used in adult populations. However, later the scale has been used with adolescents (Goldberg and Williams, 1988). A total of 82 papers reviewed have been found to utilize the GHQ with adolescents. There are four versions of GHQ (include GHQ-60, GHQ-30, GHQ-28 and GHQ-12). The original version of the GHQ contains 60 items and is known for its multi-dimensional aspects. The GHQ-12 is the shortest version and commonly used as a screening tool which was used in the current study. It focuses on breaks in normal functioning rather than on life-long traits. It only covers

disorders or patterns of adjustment associated with distress. Conventional method of scoring (0-0-1-1) was chosen over the simple Likert scale (0-1-2-3). As conventional method is believed to help eliminate any biases which might result from the respondents who tend to choose responses 1 and 4 or 2 and 3, respectively (Goldberg and Williams, 1988). The scores were summed up by adding all the items on the scale ranging from 0 to 12. Due to the various thresholds of the GHQ-12, the mean GHQ score for a population of respondents was suggested as a rough indicator for the best cut-off point (Goldberg, Oldehinkel and Ormel, 1998). Therefore, based on the mean GHQ score for this sample, the cut-off point 6 was used to determine the respondents' level of psychological well-being.

Toronto Alexithymia Scale (TAS) (Bagby et al, 1986)

The TAS is a 20-item instrument that is one of the most commonly used measures of alexithymia. It has 3 subscales:

- Difficulty Describing Feelings subscale is used to measure difficulty describing emotions.
- Difficulty Identifying Feeling subscale is used to measure difficulty identifying emotions.
- Externally-Oriented Thinking subscale is used to measure the tendency of individuals to focus their attention externally.

TAS has been used in number of studies with adolescents to see the effect of alexithymia on various disorders like substance abuse (Gatta et al. 2014), dissociation (Craparo et al, 2014) etc. Studies have also reported that there is association between childhood abuse, alexithymia, and personality disorder (Berlin Alexithymia Conference, 2010). To study whether alexithymia shares an association with any type of abuse, TAS is used as a measure in the current study. On TAS, items are rated using a 5-point Likert scale whereby 1 = strongly disagree and 5 = strongly agree. There are 5 items that are negatively keyed (items 4, 5, 10, 18 and 19). The TAS-20 uses cut-off scoring: equal to or less than 51 = non-alexithymia, equal to or greater than 61 = alexithymia. Scores of 52 to 60 = possible alexithymia. Scale demonstrates good internal consistency (Cronbach's alpha = .81) and test-retest reliability (0.77). Research using the TAS-20 demonstrates adequate levels of convergent and concurrent validity.

Difficulties in Emotion Regulation Scale (DERS) (Grazt and Roemer, 2004)

The DERS represents the most comprehensive measure of the construct to date and exhibits good reliability and validity in adults. In a study examined the psychometric properties of the DERS in a community sample of 428 adolescents. Internal consistencies for the subscales were good to excellent (alphas ranged from .76 to .89). Construct validity exhibited robust correlations with psychological problems reflecting emotion dysregulation, specifically depression, anxiety, suicidal ideation, eating disorders, alcohol use, and drug use. Inter correlations among the DERS subscales ranged from negligible to high (0.04 to 0.68). In general, results support the reliability and validity of the DERS as a measure of emotion dysregulation in adolescents (Weinberg and Klonsky, 2009). DERS has been used in wide range of researches with clinical sample to see the relationship of childhood abuse on Emotion Regulation (Martin, 2003). The scale focuses on emotion

regulation, an extremely important domain for the field of child trauma and appears to be related to behaviors of self-harm in women with a history of childhood sexual or physical abuse (Gratz and Roemer, 2004). So the present study focuses on assessing the relationship between Childhood Abuse and Emotion Dysregulation in school going children. DERS self-report questionnaire designed to assess multiple aspects of emotion dysregulation. The measure yields a total score as well as scores on six scales derived through factor analysis:

- Non-acceptance of emotional responses (NON-ACCEPTANCE)
- Difficulties engaging in goal directed behavior (GOALS)
- Impulse control difficulties (IMPULSE)
- Lack of emotional awareness (AWARENESS)
- Limited access to emotion regulation strategies (STRATEGIES)
- Lack of emotional clarity (CLARITY)

The Childhood Experience of Care and Abuse Questionnaire (CECA.Q) (Bifulco, Brown *et al.*, 1994)

The CECA.Q is a questionnaire version of the Childhood Experience of Care and Abuse interview (Bifulco, Brown *et al.*, 1994). It covers parental loss, neglect, antipathy (hostile or cold parenting), support, physical and sexual abuse before age 17 in adolescents or adults. It is validated against the interview measure (Bifulco, Bernazzani *et al.* 2005). Reliability of CECA.Q - Alpha scores were assessed for the two CECA.Q dimensions of antipathy and neglect and found to be .80 and .81, respectively, suggesting high internal consistency. Test-retest showed high levels of agreement for the summed scores: neglect (r: 0.84 neglect mother, 0.53 neglect father), antipathy (r: 0.74 antipathy from mother and 0.71 father), physical abuse (0.52 mother physical abuse and 0.51 father and 0.61 for the screen item) and sexual abuse (r: 0.70 for screening items and 0.61 for severity of first abuse) all at $p = 00:0001$ significance levels. CECA.Q aims for both a broader assessment of childhood adversity (covering care and abuse) and has items with convey a more factual description of parental behaviour. The present study use CECA as it a tool that is constructed to measure various aspects of childhood abuse.

Procedure

Principals of various schools in Delhi and NCR were approached and brief about the study was given to them and only those schools which agreed were selected. Selected schools were given a request letter from the Amity University assuring them, that study would not cause any kind of harm to participants and their confidentiality would be maintained. Once the authorities had approved the study, they assured that consent from every student / parent would be taken before considering them as a part of the study. Followed by this, the students were approached in the provided classrooms and were explained about the aim of the study. Total 30 children were administered the scales at one time. Consent was taken from each of the participant before administering the tools. Participants were given one tool at a time and a particular sequence was followed in administering the tools throughout all the schools. Firstly, GHQ was given to the participants and instructions were given to them regarding how fill the questionnaire. TAS was given next followed by DERS and lastly CECA. All the tools were administered in the same manner. Participants were assured that their confidentiality will

be maintained. After the completion of the administration participants and school authorities were thanked for their support and corporation in the study. Statistical Analysis: SPSS 21 version was used for the analysis. Participants were divided into two groups based on GHQ cut-off score (≤ 6 and ≥ 7). Data followed normal distribution in all the study variables, hence, parametric tests were employed in all analysis. Pearson's correlation was used to assess whether Childhood Experience of Care and Abuse (Parental Loss, Support, Sexual Abuse, Antipathy, Neglect and Physical Abuse) share any relationship with Difficulty in Emotion Regulation and Alexithymia. Linear Regression with entry method was used to examine the change in criterion variables (DERS and TAS20).

RESULTS

There was preponderance of female in the study (62.1%). Individuals' age ranged from 16 to 18 years ($Mean = 16.69$, $SD = 0.66$) years; 47.9% was studying in government and 52.1% in private schools of Delhi and NCR regions (Table 1). The sample was divided into two groups on the basis on their GHQ scores. A cut off of 6 was used divide the group individuals. The groups were compared on the measures Childhood Experience of Care and Abuse, Difficulty in Emotion Regulation and on variable Alexithymia. The results indicated no significant difference between the groups with high and low GHQ scores (Table 2).

Table 1. Socio-demographic and other characteristics of the sample (N=140)

Variable	Mean (SD)	N (%)
Sex (Female)	-	87 (62.1)
Age (Yr.)	-	16.69 (0.66)
School	-	
Government	-	67 (47.9)
Private	-	73 (52.1)
Medical Illness	-	
Migraine	-	4 (2.9)
Cervical	-	2 (1.4)
Asthma	-	2 (1.4)
Tuberculosis -	-	1 (0.7)
Hypertension-	-	1 (0.7)
Diabetes	-	1 (0.7)

Table – 2: Mean (SD) score on subscales of Childhood Experience of Care and Abuse Questionnaire (CECA), Difficulty in Emotion Regulation Scale and Toronto Alexithymia Scale with respect to children below and above GHQ cut-off (N = 140)

Variables	Below Cut-off (≤ 6)	Above Cut-off (≥ 7)	t-value	"p"
CECA				
Parental Loss	0.23 (0.66)	0.07 (0.37)	1.29	0.08
Support	0.93 (0.26)	0.90 (0.31)	0.55	0.61
Sexual Abuse	0.63 (1.10)	0.62 (1.11)	0.04	0.96
Antipathy	30.54 (7.66)	32.41 (9.92)	-1.09	0.27
Neglect	27.88 (8.51)	25.86 (9.18)	1.11	0.26
Physical Abuse	1.16 (1.76)	1.24 (1.86)	-0.21	0.83
Difficulty in Emotion Regulation	46.93 (27.13)	50.48 (30.99)	-0.61	0.54
Alexithymia	52.51 (14.56)	56.14 (13.68)	-1.20	0.22

Correlation analysis between Childhood Experience of Care and Abuse, Difficulty in Emotion Regulation Scale and Toronto Alexithymia Scale are shown in Table 3. A linear regression (entry method) was performed on Difficulty in Emotion Regulation Scale by Childhood Experience of Care and Abuse.

Table 3. Correlations among variables studied

Childhood Experience of Care and Abuse Questionnaire						
Abuse	Parental Loss	Support	Sexual Abuse	Antipathy	Neglect	Physical
Difficulty in Emotion Regulation	0.23*	-0.21*	0.57*	0.09	0.13	0.38*
Alexithymia	0.13	-0.06	0.59*	0.09	0.14*	0.32*

* = $p < 0.05$

Table 4. Regression output for Difficulty in Emotion Regulation Scale (Criterion Variable) and Childhood Experience of Care and Abuse Questionnaire (CECA) (Predictors)

CECA	Beta	"p"
Parental Loss	0.16	0.23
Support	-0.12	0.10
Sexual Abuse	0.46	0.00
Antipathy	-0.01	0.86
Neglect	-0.07	0.35
Physical Abuse	0.17	0.02

Table 5. Regression output for Toronto Alexithymia Scale (Criterion Variable) and Childhood Experience of Care and Abuse Questionnaire (CECA) (Predictors)

CECA	Beta	"p"
Parental Loss	0.04	0.51
Support	-0.07	0.34
Sexual Abuse	0.56	0.01
Antipathy	0.02	0.72
Neglect	-0.01	0.88
Physical Abuse	0.06	0.40

The model accounted for 38% of the variance in Emotion Regulation. However, Beta value of Sexual and Physical Abuse were only significant as shown in Table 4. Similar was regression was performed Alexithymia Scale by Childhood Experience of Care and Abuse. The model accounted for 35% of the variance in Alexithymia. However, Beta value of Sexual Abuse was only significant as shown in Table 5.

DISCUSSION

It is hard to assess the effect of childhood experiences on the psychiatric problems and disorders in adulthood as neither experimental approaches nor prospective researches are

possible. In any case, an expanding number of review reports suggest that psychiatric issues might be identified with childhood experiences, such as physical, sexual, emotional abuse and neglect. Specifically, critical significant correlations between the severity of psychiatric symptoms and that of stressful and traumatic experiences during childhood were found. Reports of sexual and physical abuse in childhood are more regular in psychiatric patients than in the healthy population; among these are patients determined to have problems in somatization disorders, regulating emotions which is most commonly seen in borderline personality disorder, substance use (Herman et al. 1989). So focus of the present study was on how early childhood neglect and abuse had impact on regulation and recognition of emotion in children. Presently the majority of the studies have been done on clinical population to find where emotion dysregulation and problem in recognition occurs. But the present study focused on general school going adolescent and in what way childhood neglect and abuse affected them. All the children belonged to 16 – 18 years of age range and came from both the government and private school (see Table 1). Once the demographic information and consent was taken the sample was administered General Health Questionnaire – 12 (GHQ – 12), Childhood Experience of Care and Abuse Questionnaire (CACE.Q), Difficulty in Emotion Regulation Scale (DERS) and Toronto Alexithymia Scale (TAS20). The sample was divided into two groups on the basis on their GHQ scores. A cut off of 6 was used to divide the group individuals. The groups were compared on the measures Childhood Experience of Care and Abuse, Difficulty in Emotion Regulation and on variable Alexithymia. The results indicated no significant difference between the groups with high and low GHQ scores (Table 2).

Correlation analysis was conducted between all the variables of the study, including CACE.Q, DERS and TAS20. Results indicated that emotion regulation was positively correlated with parental loss, sexual abuse and physical abuse. The findings are supported with by the earlier research findings where childhood abuse is associated with difficulty in emotion regulation (Kent *et al.*, 1999). Researches also demonstrated an association between childhood neglect and emotion dysregulation (Deborde *et al.*, 2015) which didn't come out to be significant in the present study. Support was found to be negatively associated with emotion dysregulation. In a previous study, it was found that support was a mediating factor between childhood traumatic experiences and adult mental health problems. Alexithymia or problem in emotion recognition shared a positive correlation with sexual abuse, neglect and physical abuse. Researches have shown that children who get conflicting or unforgiving caregiving experiences face difficulty in emotion processing, understanding emotions of self and others and expressing emotions (Dadds and Salmon, 2003; Gaensbauer, 1982).

Linear Regression was performed on Difficulty in Emotion Regulation Scale (DERS) by Childhood Experience of Care and Abuse (CECA). The overall model accounted for 38% of the variance in Emotion Regulation which means 38% of the change in DERS is caused by CECA, where Sexual abuse and Physical abuse responsible for 46% and 17% of the change, respectively, in DERS. Studies have also shown that traumatic childhood experiences, such as sexual, emotional, or physical abuse and neglect, have been recognized as risk factors that increase the probability a personality disorder may develop (Johnson et al, 2005). There are a number of studies that have

supported the finding that sexual abuse significantly contributes to emotion dysregulation. A study found that different forms of childhood abuse and found that the incidence of sexual abuse on its own was associated with suicidal thoughts and attempts, promiscuity and internalizing symptoms (Arata *et al.*, 2005). A study has identified that child sexual abuse is a significant predictor of emotion dysregulation (Messman-Moore *et al.*, 2010) and substance use (Simpson and Miller, 2002; Hayatbakhsh *et al.*, 2007) and is also significantly correlated with emotion regulation and subsequent substance (Ballon, Courbasson, and Smith, 2001). Children who have been physically abused demonstrate a variety of problem behaviours and responses including aggression, ADHD, anxiety, intellectual and cognitive impairment, depression, conduct disorder, neurological problems, negative parent-child interactions, poor interpersonal and social abilities, self-harm, substance-related disorders, violent and criminal behavior (Kaplan *et al.*, 1998). A study proposed a hypothesis in which social support acts as a buffer, protecting the individual from the negative emotions caused by potentially stressful events (Cohen and Wills, 1985). But in the current study didn't show to have any significant effect on either DERS or TAS. Children who have suffered abuse often experience difficulty identifying and labelling the emotions they are experiencing and have difficulties managing their emotions, particularly deescalating from distress, have difficulty expressing their emotions in appropriate ways. So when linear regression was performed on Toronto Alexithymia Scale (TAS) by Childhood Experience of Care and Abuse (CECA), similar results were found. The overall model accounted for 35% of the variance in Emotion Regulation which means 35% of the change in TAS is caused by CECA, where Sexual Abuse alone is responsible for 56% of the change in TAS.

Alexithymia was fundamentally higher when the sexual abuse first happened after the casualty had achieved the age of 12 yr., when a perpetrator of the sexual abuse was a father or stepfather, and when the abuse included oral, vaginal, and additionally anal entrance. Results were interpreted as demonstrating that the development of alexithymic may represent another defense victims may employ to insulate themselves from painful affect, alongside dissociative manifestations and substance abuse (Scher and Twaite, 1999). In summary the findings of the present study suggested that physical and sexual abuse in the childhood impacts individual's ability to understand, label and regulate his emotions. And as per literature these deficits in emotion regulation and recognition can lead to development of various psychiatric disorders (Silverman *et al.* 1996). Although literature on psychiatric population with history of neglect and abuse is abundant, however, similar studies on normal school going population were scarce. The present study highlights the need for mental health professionals to also focus on the needs of children in general population. As the results on the current study have showed that childhood neglect and abuse significantly affect emotion regulation and recognition. Therefore, providing intervention at the earliest stage possible will facilitate resolution of emotional conflict and build up resilience, thereby preventing occurrence of any mental health issues.

Conclusion

In conclusion, current study showed that children who scored below and above the GHQ cut-off did not differ significantly

on any of the study variable. Analysis indicated deficits in emotion regulation and emotion recognition in children reporting of adverse childhood experience such as neglect and abuse. Sexual and physical abuse emerged as significant variables, accounting for maximum variance in criterion variables, viz, emotion regulation and recognition.

Limitations of the study and implications of the findings

In the current study, age band was very narrow. For fear of further reducing group size thereby compromising on the power, the subjects of different age band were grouped and their responses were analyzed in totality. This, and relatively smaller sample size, could have contributed to observed variance in emotion recognition and regulation which is known to vary depending upon developmental maturity. Further, present study lacked any objective measure of subjects' control and recognition of emotion. May be objective report by the caregivers or teachers could have improved the validity of results, along with self-report measures. Self-report measures are known for social desirability bias. Future research in this area should take these precautions. Notwithstanding these caveats, the clinicians working in child mental health area should be sensitive to possible adverse negative experiences in children with emotional and behavioural disorders, and should be skilled in eliciting these experiences as it would have a significant implication in treatment. From a general well-being point of view, the present findings highlight the prevention of childhood adverse/negative experiences as main agenda of mental health care. Success in preventing adverse child experiences is related, in a linear way, to reducing the prevalence of mental disorders of childhood and adulthood.

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