TRAUMA-RELATED EFFECTS AND INTERVENTIONS FOR CHILDREN WITH HIV+ STATUS

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Abstract : Trauma is an internalised damaging impact in response to an external threatening event. Society often overlooks the significant effects of trauma in HIV+ children. HIV (Human Immunodeficiency Virus) attacks the immune system, the body's natural defense system. The last stage of HIV infection is AIDS (Acquired Immunodeficiency Syndrome). This research focuses on traumatic effects of HIV: depression and anxiety which can trigger severe responses, affecting the children in physical, cognitive, emotional, and behavioral aspects. The study surveyed 31 HIV+ male children from Gujarat, India, who had contracted the virus through Mother-To-Child-Transmission (MTCT). The Children’s Depression Inventory-2 was used to access severity of depressive symptoms and the Spence Children's Anxiety Scale (SCAS) was used to identify symptoms of various anxiety disorders. The results concluded that 25 out of 31 (80.65%) participants showed statistically significant positive symptoms of depression. All participants also showed statistically significant positive symptoms of anxiety. The findings also necessitate the urgency for mental health professionals to manage and treat symptoms of depression and anxiety in this sample. This research can be used by NGOs, Government hospitals, orphanages, and special care homes to improve the mental health of HIV+ children.

Index Terms - HIV, trauma, children, depression, anxiety, intervention

I. INTRODUCTION

Human Immunodeficiency Virus (HIV) has crippled the immune systems of nearly 1 million people in 2016 alone (World Health Organisation, 2016). Various studies have been exploring the psychological effects and appropriate psychotherapeutic interventions for HIV and AIDS affected persons.

HIV is a lentivirus that targets the Helper-T Cells (CD4 cells) of the immune system causing a breakdown of Cell-Mediated Immunity (Avert.org, 2015). According to Nordqvist (2018), the virus can be transmitted through three ways: a) sexual transmission from unprotected sexual activities, or sharing sex toys with an HIV-positive person, b) Perinatal transmission from infected mother to child (MTCT) through pregnancy, childbirth, or breast-feeding, c) blood transmission from usage of unsterilized needles, exchange of bodily fluids, or blood transfusion.

After entry, the virus can manifest in different stages leading to an array of symptoms. After 2-6 weeks of transmission, the individual generally suffers from Acute Retroviral Syndrome. This is the early stage of HIV where one experiences fever, body weakness, joint and muscle aches, night sweats, enlarged glands, red rash, and unintentional weight loss. After these primary symptoms subside, asymptomatic stage occurs. In this stage, the virus continues to multiply and damage the immune system without significant symptoms. Here, the virus can be transmitted even in the absence of any indicators. This stage can last for several years before morphing into HIV-3, also known as Acquired Immunodeficiency Syndrome or AIDS. Symptoms of AIDS may encompass chronic diarrhoea and fever, dyspnoea, rapid weight loss, dry cough, etc. (Nordqvist, 2018). However, HIV does not always lead to AIDS and sometimes a person may be ignorant of living with the virus throughout life. Opportunistic infections from fungi, viruses, bacteria, or parasites are the leading cause of death in AIDS affected patients (U.S. Department Of Health and Human Services, 2017).

In 2016, India had 80,000 new HIV infections and 62,000 AIDS-related deaths. The populations most affected by HIV in India are sex workers (2.2%), gay men and other men who have sex with men (4.3%), intravenous drug users (9.9%), and transgenders (7.2%). In 2016, only 49% of the HIV-infected population was accessing antiretroviral therapy. Stigma, myths, and discrimination may lessen the well-being and self-esteem of such people (UNAIDS). Myths include catching the virus from non-sexual contact (shaking hands, hugging, using same cutlery, sharing towel), transmission from blood-sucking insects like mosquitoes, transmission mainly via homosexual sexual activity, or transmission through exchange of body fluids like sweat, saliva, tears, urine, or faeces (Avert.org, 2015; Nordqvist, 2018; HealthHub, 2015).

According to UNICEF (HIV/AIDS in India), roughly 220,000 Indian children have contracted the HIV virus. Majority of the paediatric HIV cases are a result of Mother-to-Child Transmission (MTCT) whereas 30% are infected by sexual abuse, blood
transfusion, unsterile syringes, or intravenous drug use. Over 35% of AIDS cases reported are below 25 years of age and 50% of new infections are between 15 and 24 years old. In general HIV care, the aggravated progression of HIV infection in children is largely due to the failure in timely diagnosis, absence of anti-retroviral therapy (ART), and insufficient general care (UNICEF India, 2006).

The story of paediatric HIV in India is dire, owing to the prevalence of stigma and breakdown of supporting systems. Many children are innocently convicted of a life-threatening disease leading to both, personal and familial hardships. School dropouts, ostracization, neglect of parents and peers, low self-image, depression, and anxiety are some of the common issues which these children have to face. Children affected by HIV/AIDS need pharmacotherapy, individual and family counselling, and a supporting environment (Ministry of Women and Child Development Government of India, 2012).

According to the American Psychological Association (APA), trauma is defined as “an emotional response someone has to an extremely negative event” (An American Addiction Centers Resource, 2018). Awareness of HIV infection affects a person’s physical, mental, emotional, social, and/or spiritual functioning. This contributes to HIV-related trauma. It can impair a person’s worldview and sense of safety, personal and social identity, purpose and goals of life, interpersonal relationships, and emotional regulation. More knowledge of having contracted HIV, treatment failure, and higher non-adherence to HIV drugs can result in deterioration of physical and mental health causing trauma (thewellproject.org, 2018).

The World Mental Health survey estimated that HIV with depression and anxiety will be among the top ten causes of morbidity in developing countries by the year 2030. In a research with 900 participants conducted in southern Saharan Africa, 27% of HIV-infected and 5.8% of HIV-uninfected children showed depressive symptoms (Lwidiko, Kibusi, Nyundo, Bonaventura, & Mpondo, 2018). A case-control design carried in Rwanda compared mental health, risk, and protective factors in HIV-positive, HIV-affected (due to caregiver HIV), and HIV-unaffected in a sample of 683 children aged 10 to 17 years. HIV-affected and HIV+ children showed higher levels of depression, anxiety, conduct problems, and functional impairment when compared with HIV-unaffected children (Betancourt et al., 2014). In rural China, there is a high level of stigma towards HIV-infected individuals and their family members. The researchers examined the relationship between associative stigma, self-esteem, optimism, anxiety, and depression among 195 children of HIV-infected parents. The results concluded that more than one-third (35.4 %) of the subjects scored high in depression and 67.7 % of them scored high for different types of anxiety disorder. Through structural equation modelling, associative stigma had a significant negative relationship on self-esteem and optimism in children with higher levels of depression and anxiety (Phoenix, Joseph, Xiaonan, & Jing, 2014). Most of the above studies explore different mental illnesses in paediatric HIV population from different countries. Very few studies focus on the magnitude of depression and anxiety among children in India who are infected with Mother-To-Child Transmitted HIV. Thus, this research is an attempt to address the limitation in this area of study.

HIV affects children physically, mentally, emotionally, socially, and/or spiritually. HIV related trauma leads to an array of effects like PTSD, nightmares, low self-esteem, or low self-image. These effects lead to biased perceptions of safety and external world. This is worsened by the stigma and the discrimination done by the society, especially in the neighbourhood and schools (Falvey, 2016).

This research focuses on two main traumatic effects of HIV: depression and anxiety. Depression is a type of mood disorder characterized by persistently low mood and a feeling of sadness and loss of interest. Depression in children may include symptoms of sadness, irritability, clingingness, fatigue, worry, aches and pains, refusing to go to school, or being underweight (Mayo Clinic Staff, 2018). These trauma-related sequelae have the potential to disrupt psychosocial functioning and decrease the quality of life for individuals living with HIV. Anxiety is an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure. Children with anxiety disorders usually have recurring intrusive thoughts. They may avoid certain situations like school, and may also show physical symptoms such as sweating, trembling, dizziness or a rapid heartbeat (American Psychological Association). Doctors should not only focus on the biological treatment of HIV but also on psychological interventions directed towards increasing self-efficacy, empowering children, providing psychoeducation to the caregivers and the affected, and dealing with social stigmas.

The current study explores the detrimental psychological effects in HIV and AIDS affected children. The objective of the study is to identify traumatic effects like depression and anxiety in the sample and to shed light on appropriate psychotherapeutic interventions.

II. RESEARCH METHODOLOGY

2.1. Objectives
1. To identify the traumatic effects of HIV like depression in paediatric sample.
2. To identify the traumatic effects of HIV like anxiety in paediatric sample.
3. To suggest future interventions for such trauma-affected children.
2.2 Population and sample

There were two inclusion criteria for the selection of the sample. Firstly, the sample should be below the age of 18 years. Secondly, the children should have contracted the virus through Mother-To-Child-Transmission (MTCT). The sample consisted of 31 HIV+ male children. The data was taken from Gandhinagar, Gujarat, India. Ages of these subjects ranged from 8 to 15 years. The mean of the age was 13.55 with a standard deviation of 1.80. All the children belonged to economically backward class. Non-probability sampling (purposive sampling) was the technique employed for the selection of the sample.

2.3 Hypotheses

This study predicted an absence of traumatic effects in HIV+ children. The study hypothesized that traumatic symptoms of depression will have no inter-scale correlation in HIV+ children. It is also predicted that traumatic symptoms of anxiety will have no inter-scale correlation in HIV+ children.

2.4 Measures/Tools used

The current study uses two scales to measure depression and anxiety (traumatic effects of HIV) in paediatric sample.

Children Depression Inventory (CDI) (Kovacs, 2015) was developed to evaluate depressive symptoms in children and adolescents. The CDI 2 is a revised version of the Children’s Depression Inventory. The new items in the scale comprehensively focus on the early identification of cognitive, affective, and behavioural depressive symptoms, and aid in the diagnosis of depression and related disorders. This self-report tool is helpful in the monitoring of treatment effectiveness (CognitiveCentre). The Cronbach’s Alpha reliability measures for the original scale were 0.71-0.89. The validity of the CDI has been established, especially construct and discriminant validity (Hodges, 1990).

The age range for assessment is 7 to 17 years. The test taker must have a reading level of 2nd grade. It is a 27-item paper-and-pencil test with a time duration of 15-20 minutes (Pearson). Each item in the scale has a group of three sentences describing the feelings and ideas of the person with a two-week symptom criterion. The six subscales are - Negative Mood/ Physical Symptoms (e.g., sad, irritable, crying, fatigue, loss of appetite), Negative Self-Esteem (e.g., feels unloved, negative self-view), Interpersonal Problems (e.g., social avoidance, gets into arguments), Ineffectiveness (e.g., declined grades, can’t do things), Emotional Problems (e.g., looks sad, cranky, trouble sleeping), and Functional Problems (e.g., worse school performance, doesn’t spend time with friends). The subscale ‘Emotional Problems’ is a combination of ‘Negative Mood/Physical Symptoms’ and ‘Negative Self-Esteem’. The subscale ‘Functional Problems’ is a combination of ‘Interpersonal Problems’ and ‘Ineffectiveness’.

The Spence Children's Anxiety Scale (SCAS) is developed by Susan H. Spence (Spence Children's Anxiety Scale). The self-report scale assesses the severity of anxiety symptoms mainly based on the DSM-IV criteria for anxiety disorder. It assists in the diagnosis and evaluation of therapeutic impact by indicating the nature and extent of anxiety symptoms. The original SCAS has consistently shown a very high internal reliability (α=.87-.94). Internal reliability of the subscales ranges from satisfactory to high α=0.48-0.81. Strong correlation has been established by comparing total SCAS scores and other child anxiety measuring tests (e.g., SDQ (r=.46-.74), SCARED (r=.85-.89), RCMAS (r =.71)) etc. Thus, results have been supportive of the convergent validity of the normative SCAS (Spence Children's Anxiety Scale).

It consists of 44 questions with a 4-point frequency scale -never (0) to always (3), describing the frequency of each symptom as experienced by the subject. It measures these symptoms in children aged 8-15. It is a paper-and-pencil test with a time duration of 10-15 minutes. It is designed to identity 6 domains of anxiety: Generalized Anxiety, Panic/Agoraphobia, Social Phobia, Separation Anxiety, Obsessive Compulsive Disorder, and Physical Injury Fears. In Generalised Anxiety (GA), children can worry about a plethora of questions to predict every possible scenario (The Children's and Adult Center for OCD and Anxiety.). Panic attacks in children consist of a period of intense fear or discomfort which might also accompany Agoraphobia, that is, a morbid fear of having a panic attack where escape would be difficult (Torres , et al., 2014; Coping Cat Parents). Social phobia (SP) in children is an intense fear, anxiety, and avoidance of social situations where there is the potential of being scrutinized or criticised by others (Matthew, Melanie, Khemlani-Patel, & Fugen). Separation Anxiety (SA) is a developmentally improper and an intense fear of becoming separated from a significant attachment figure like parents or caregivers (Matthew, Melanie, Khemlani-Patel, & Fugen). Obsessive-compulsive disorder (OCD) causes children to have obsessions (unwanted thoughts, feelings, and fears). To relieve the obsessions, children engage in compulsive behaviours (Hasan, 2017). Physical Injury Fears (PIF) are fears of common objects and events leading to specific phobias in children (e.g., “I am scared of dogs”) (Mellon & Moutavelis, 2007).

The raw scores obtained are converted to t-scores and percentile rank. Classification of the depression severity is analysed according to the percentile ranks: Very elevated score (98+), Elevated score (93-97), High Average score (84-92), Average score (16-83), and Low score (<16).

The raw scores are converted to t-scores. The scores are classified into Elevated, Very elevated, High elevated.
2.5 Procedure

The objective of our study was to assess the traumatic effects of HIV like depression and anxiety in paediatric sample and to suggest future interventions for the same. The sample consisted of 31 male HIV+ children. Consent was taken from the respective caregivers. The subjects were called individually into a quiet room and briefed about the administration of the tests. They were assessed for depression and anxiety by using CDI-2 and SCAS. They were instructed to tick the suitable options considering that there were no right or wrong answers. For CDI-2, the subjects were required to answer based on a two-week symptom criterion. For SCAS, they had to respond according to the frequency of anxiety symptoms.

In CDI-2, raw scores were converted to t-scores and percentile rank. Karl Pearson’s Correlation was used to correlate results of the subscales. These values were also checked for significance (p<0.01, p<0.05) using the two-tailed critical t-values.

For the scoring of SCAS, out of the 44 items, 38 reflected specific symptoms of anxiety and 6 related to positive, filler items to reduce negative response bias. Here, the raw scores were converted to t-scores. Karl Pearson’s correlation was used to correlate results of the subscales. These values were also checked for significance (p<0.01, p<0.05) using the two-tailed critical t-values.

Confidentiality of the subjects was maintained and they were assured that their identities would not be revealed.

III. RESULTS AND DISCUSSION

3.1 Results of Study Variables

Trauma is an internalised damaging impact in response to an external threatening event which is often overlooked in paediatric HIV+ population. HIV is a debilitating and traumatic condition that affects psychological, functional, and social aspects in an individual’s life span.

The present research aimed to evaluate the traumatic effects induced by HIV infection in children who contracted the virus through Mother-to-Child-Transmission (MTCT). This study is an attempt to investigate the signs and symptoms of traumatic effects like depression and anxiety in paediatric population and to suggest interventions as a future implication towards the assessed symptoms in this sample.

The objective of the study was to assess depression and anxiety in paediatric HIV+ sample and to shed light on suitable psychotherapeutic interventions.

Children’s Depression Inventory-2 was used to assess depressive symptoms with a two-week criterion (see Table 3.1).

Table 3.1: Correlation of subscales and total CDI score

<table>
<thead>
<tr>
<th>Pearson Correlations</th>
<th>N=31</th>
<th>Total CDI</th>
<th>A</th>
<th>B</th>
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A= Negative Mood/Physical Symptoms; B= Negative Self-Esteem; A+B= Emotional Problems; C= Ineffectiveness; D= Interpersonal Problems; C+D= Functional Problems

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 3.1 shows correlation of subscales and total CDI score, which was found to have an overall positive correlation with a few non-significant positive correlations. 25 out of 31 (80.65%) participants showed statistically significant symptoms of depression. Based on the results, 9 got “Average” score, 9 were in “High Average” category, 2 had “Elevated” symptoms and 5 had “Very Elevated” symptoms of depression.

According to the correlational analysis, Emotional Problems were significantly correlated with Negative Mood/Physical Symptoms (r=0.904; p<0.01), Negative Self-Esteem (r=0.803; p<0.01), Ineffectiveness (r=0.471; p<0.01) and Interpersonal Problems (r=0.412; p<0.05). This has been supported by Goldstein (2018) where he mentioned that physical and mental signs
indicate emotional distress like recurring sleep disturbances, change in eating patterns, headaches, and difficulty in managing anger (Liu, Bangter, Rovine, Zarit, & Almeida, 2018). Elizabeth Venzin (n.d.) links poor self-esteem with mental and emotional problems which could be due to poor relationships, negative self-perception, social stigma of mental and physical illness, dysfunctional early years, and traumatic stressors in early life. Self-perceived ineffective problem-solvers reported more depression, more trait and state anxiety, a more external locus of control, and increased interpersonal problems (Andrews; Nezu, 1985; Gold, 2016).

Functional problems were significantly correlated with Negative Mood/Physical Symptoms ($r=0.410; p<0.05$), Negative Self-Esteem ($r=0.681; p<0.01$), Ineffectiveness ($r=0.848; p<0.01$) and Interpersonal Problems ($r=0.731; p<0.01$). Reduction in a person’s ability to function at tasks varying from an increase in purposeless physical activity to difficulty in thinking, concentrating, and decision-making can lead to negative moods (Parekh, 2017). The State of Victoria and the Department of Health & Human Services (2014) concluded that troubled childhood experiences and ongoing medical condition (chronic pain, severe illness, or physical disability) is the root of negative self-esteem, leading to an inferior self-judgement compared to peers. A person with low self-esteem is unable to cope with a challenging life event because they consider themselves to be ‘hopeless’ which results in functional problems (Kovacs, 2011). Since humans are social animals, they strive to maintain relationships with others with the help of emotions (Myers & Diener, 1995; Diener & Seligman, 2002, as mentioned in McKnight & Kashdan, 2009). Symptoms of depression may include an inability to process cues in an emotionally relevant social interaction. When emotions no longer navigate relationships, the social functioning deteriorates and suffers. (Hatfield, Cacioppo, & Rapson, 1994; Joiner & Katz, 1999; Zausznieski & Rong, 1999, as mentioned in McKnight & Kashdan, 2009).

The study also revealed an insignificant correlation of Negative Mood/Physical Symptom with Ineffectiveness ($r=0.303; p>0.05$) and Interpersonal Problems ($r=0.305; p>0.05$). A research based on Structural Model of Depression (Ara, Talepasand, & Rezaei, 2017) verifies that loneliness is another variable of negative mood that affects depression. Peplau et al. defined loneliness as the gap between the desirable and existing levels in an individual’s social relations. Negative mood influences the closeness in interpersonal relationships. This suggests that loneliness positively correlates with internalization, such as depression which inadvertently leads to ineffectiveness (Lyubomirsky & Nolen-Hoeksema, 1995). According to Boivin and Hymel, this internalisation has a mediating effect on a child’s social conditions. The tendency to ruminate in self-defeating thoughts has a high probability of leading to depression due to unhealthy coping styles. Thus, insignificance in the results is because of individual coping styles (Mills, Reiss, & Dombeck).

The study also revealed that Negative Self-Esteem was significantly correlated with Ineffectiveness ($r=0.563; p<0.01$) and Interpersonal Problems ($r=0.451; p<0.05$). The results are in line with an article by The State of Victoria and the Department of Health & Human Services (2014). Causes of negative self-esteem are lack of parents, poor academic record, ongoing medical condition like HIV, maltreatment by parents or caregivers or peers, and mental illness. A person with low self-esteem will be self-critical, neglects oneself, ignores positive qualities, feels inferior, has persistent feelings of sadness, depression, anxiety, anger, shame, or guilt. Negative self-esteem affects quality of life in terms of effectiveness in relationships and work. For example, a person with esteem problems will easily feel angry and bully other people.

Emotional Problems were significantly associated with Functional Problems ($r=0.595; p<0.01$). An informational report by Mayo Foundation for Medical Education and Research (2017), shows that childhood depression includes emotional problems (worthlessness, hopelessness, extreme sensitivity to rejection or failure) and functional problems (decreased appetite, restlessness, social isolation, angry outbursts, lack of or excessive sleepiness) causing significant distress at school, home, and in social activities.

With respect to Total CDI score, significant correlation was found with Emotional Problems ($r=0.885; p<0.01$) and Functional Problems ($r=0.898; p<0.01$). According to a newsletter of Childhood Depression (Brennan, 2016), parents of such children reported noticing emotional problems like excessive crying, low self-esteem, increased sensitivity to criticism, irritable mood, vocal outbursts, and pessimistic attitude (Dryden-Edwards; Krans, 2016). Son and Kirchener (2000) have concluded that children with depression are cognitively able to internalize environmental stressors like medical conditions, life failures, or criticism. Some children express depression through somatic complaints (headaches), anxiety (school phobia), and irritability leading to ineffectiveness and functional problems in daily life and relations.

The results of Table 3.1 reject the null hypothesis that traumatic symptoms of depression would have no inter-scale correlation in HIV+ children. All of the above studies have concluded that symptoms of depression are prominently present in HIV+ population. These studies are relevant in explaining the traumatic effects like depression experienced by this MTCT paediatric HIV sample.

The Spence Children’s Anxiety Scale was developed to assess severity of anxiety symptoms among 7-17-year olds.
Table 3.2: Correlation of subscales and total SCAS score

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<th>Pearson Correlations</th>
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<td>N=31</td>
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<td>Total Spence</td>
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<td>** Correlation is significant at the 0.01 level (2-tailed).</td>
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<td>* Correlation is significant at the 0.05 level (2-tailed).</td>
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</table>

SA= Separation Anxiety, SP= Social Phobia, OCD= Obsessive Compulsive Disorder, PA= Panic/ Agoraphobia, PIF= Physical Injury Fears, GA= Generalised Anxiety.

Table 3.2 shows correlation of subscales and total SCAS score, which was found to have an overall positive correlation with a few non-significant inverse and positive correlations. All participants showed statistically significant symptoms of anxiety. Based on the results, 1 was in “Elevated” category, 10 had “Very Elevated” symptoms and 20 had “High Elevated” symptoms of anxiety.

According to the correlational analysis, Obsessive Compulsive Disorder (OCD) showed non-significant correlation with any of the subscales i.e. Generalised Anxiety (r= 0.152, p>0.05), Panic/Agoraphobia (r=0.021; p>0.05), Social Phobia (r= 0.030; p>0.05), Separation Anxiety (r= -0.126; p>0.05), Physical Injury Fears (r= -0.284; p>0.05), Total Spence Score (r=0.305; p> 0.05). Children with OCD may spend several hours per day focusing on their obsessions and performing rituals. Unlike adults, children with OCD may not recognize that their obsessions and compulsions are excessive or for that matter, that they have awareness about their obsessions and compulsions. Children with OCD who do not show compulsions usually indulge in obsessive thinking. More importantly, OCD in children is diagnosed around age 10 which affects the results of the correlation directly (Anxiety and Depression Association of America, 2015).

The study also revealed significant correlation of Generalised Anxiety (GA) with Separation Anxiety (r=0.536; p<0.01) and Physical Injury Fears (r=0.644; p<0.01). Children who have experienced challenging life situations (like living with HIV) or social hardships may be at greater risk for developing GA. GA brings a pessimistic outlook leading to frequent anticipation of mishaps or worst-case outcomes. Separation anxiety may affect multiple areas of the child's life like maintaining healthy relationship with caregivers, classmates, and close friends (Low, 2018). GA may result into Specific phobias or Physical Injury Fears (PIF). PIF can be caused by a variety of factors, for instance, experiencing a traumatic event or observing others going through any hardship (Goldberg, 2017; Shelton, 2018).

The study also reported a significant association of Panic/Agoraphobia (PA) with Separation Anxiety (SA) (r=0.596; p<0.01) and insignificant with Social Phobia (SP) (r=0.206; p>0.05). Children might have school phobia because of teasing, discrimination, or stigma against them amongst peers. Both PA and SP may involve the fear of public places, which is countered by taking the children for various outings and visits to malls. Thus, being in open spaces and in social situations may not cause discomfort (Giulio, et al., 1988; Cuncic, 2018).

The correlational coefficient of Social Phobia with Separation Anxiety was 0.657 (p<0.01). The child may show dependency on specific caregivers and separating from them would cause anxiety. Being asked to perform in class, interact with non-caretakers will cause unease, tension, and stress. Such social situations may result in the fear of uncertainty. The absence of the nourishing close proximity of the caregiver or caregiving environment would result in social phobia or social anxiety (Anxiety Disorder (Social Phobia); Separation Anxiety Disorder).

Separation Anxiety (SA) was significantly associated with Physical Injury Fears (PIF) (r=0.408, p<0.05). PIF involves having fears that they or someone they care about will be harmed. These fears often lead to checking behaviour i.e. if they are safe in the room. Children with SA will often fear for themselves or their caregivers because separating from them will cause tremendous anxiety. Hence, SA and PIF function in a loop, one leading to the other (BeyondOCD).

With respect to Total Spence score, Generalised Anxiety (r=0.729), Panic/Agoraphobia (r=0.701), Social Phobia (r=0.549), Separation Anxiety (r=0.660), and Physical Injury Fears (r=0.619) were correlated significantly (p<0.01). Children with Generalised Anxiety tend to be very hard on themselves and strive for perfection. They may also seek constant approval or reassurance from others and thus worry excessively about things like grades and relations. Panic disorder can interfere with daily activities, causing them to avoid situations where they fear they might experience an attack. The complication is greater when
people also suffer from agoraphobia. Social phobia involves an intense fear of social and performance situations and activities such as being asked to speak up in class or starting a conversation with a classmate. It significantly impairs the child’s performance, school attendance, socialization with peers, and developing relationships. Separation anxiety causes them to worry about bad things happening to their caregivers or may sense something terrible while they depart from their loved ones (Anxiety and Depression Association of America, 2015).

The results of Table 3.2 reject the null hypothesis that traumatic symptoms of anxiety would have no inter-scale correlation in HIV+ children. All of the above studies have concluded that anxiety symptoms are significantly present in HIV+ population, except OCD. These studies are relevant in explaining the traumatic effects like anxiety experienced by this paediatric HIV sample.

The results did not support the null hypothesis that there would be an absence of traumatic effects in HIV+ children. However, both Table 1 and Table 2 showed significant traumatic effects of depressive and anxiety symptoms on paediatric HIV+ population. The findings also necessitate the urgency for mental health professionals to manage and treat symptoms of depression and anxiety in this sample.

3.2 Future Implications: Interventions

Psychological interventions include a variety of behavioural and psychotherapeutic treatments designed to reduce psychological distress and maladaptive behaviour through counseling, support, interaction, or advice. These children have shown signs and symptoms of depression and anxiety due to HIV trauma. Therefore, this study suggests a few interventions to reduce or manage the symptoms when encountered with similar research findings.

Depression was the first traumatic effect found in these HIV+ children. People suffering from depression often fear that “anything that can go wrong, will go wrong”. They may also be preoccupied with thoughts such as “something bad will happen”, or “I will fail”. A mental health professional can help identify, address, and decrease these cognitive distortions by asking questions like “what is the worst thing that could happen?”.

Interpersonal therapy focuses on improving interpersonal skills. The therapist evaluates social interactions and recognizes negative patterns (social isolation) and helps them learn strategies to understand and interact positively with others (Parekh, 2017; Andrews; Krans, 2016; Dryden-Edwards).

Anxiety was the second traumatic effect found in these children. When symptoms affect functioning, the clinician should determine whether symptoms are specific (such as with a social phobia, OCD), pertain only to certain situations (such as with Physical Injury Fears), or are more diffused (such as with a generalized anxiety). Suggestions (Grossman) for management of anxiety symptoms are-

1. Psycho-educating caregivers about anxiety.
2. Encouraging appropriate sleep, nutrition, and exercise.
3. Establishing realistic routines and discussing how the child can handle unexpected situations.
4. Using relaxation techniques like visual imagery, progressive relaxation, desensitization, and deep breathing.
5. Using simple cognitive behavioural techniques such as preparing children to think and act in imagined “worst scenario” situations.
6. Encouraging caregivers to let young children experience some discomfort and difficulty for the development of coping skills.
7. Discouraging caregivers from setting unrealistic expectations of perfection from such children.

Simple or specific phobias have been quite effectively treated with behaviour therapy (Marks, 1987). In counter-conditioning (Watson, 1924), a relaxation response is substituted for the fear response in the presence of the phobic stimulus. Since relaxation is incompatible with feeling fearful, hence relaxation response counters the fear response. Counter-conditioning, when used in a systematic and gradual way is known as systematic desensitization (Joseph Wolpe,1958). This desensitization involves three steps: (1) training the person to physically relax, (2) establishing an anxiety hierarchy of the stimuli, and (3) counter-conditioning relaxation (Rainey, 1997).

Social skills are the behaviours, verbal and non-verbal, that make communications effective and a person who uses such skills is said to be socially competent. Social skills training (SST) is often combined with cognitive-behavioural therapy. Children can be given SST like maintaining eye contact while conversing, or smiling while greeting people to improve social competence and self-confidence. Some techniques of SST involve maintaining appropriate speech volume in conversations, intonation or learning to emphasise important words, and expressing opinions. SST can be employed in both depression and anxiety (MyVMC, 2008).

The high rates of trauma among people living with HIV calls for an urgent need of trauma-recovery interventions. Relatively fewer interventions have been mentioned in the literature. However, integrating mental health and physical care would provide a more holistic treatment for people. Educators who share a similar blood status can be trained to provide education and social support (Gangbar & Globerman, 2014).
Incorporation of psycho-education is important to create awareness at all levels of affected and unaffected persons. Collaborative networks between medical professionals and trauma specialists or counsellors may also help to improve care for trauma affected children. Social cognitive models emphasizing relaxation skills, coping strategies, and social support have been effective in mediating mood problems and stress-related hormones in people with HIV. Group cognitive-behavioural strategies, like exposure, coping skills training, and stress management have shown evidence-based efficacy (Gangbar & Globerman, 2014).

Self-esteem is strongly related to how one views and reacts to the things that happen in life. Self-esteem building suggestions include talking to oneself positively in a supportive, kind, and understanding manner; challenging negative ‘self-talk’; not comparing oneself to others; evaluating one’s special qualities; learning to let go of the past disappointments; and scheduling enjoyable events. Building self-esteem is crucial for happier relationships and fulfilling goals. Self-esteem can also be improved by feeling loved and supported and being able to offer love and support in return (Gold, 2016; The State of Victoria and the Department of Health and Human Services, 2014).

IV. CONCLUSION

There exists a considerable degree of trauma and its associated effects in Mother-To-Child-Transmitted (MTCT) HIV in children. The results showed that there is significant presence of depression and anxiety symptoms in these children. Limitations of the present study include fewer subjects due to unavailability of MTCT HIV children and unavailability of female population. The study finds relevance in trauma and medical education by integrating psychological services with biological treatment plans for children residing in NGOs, orphanages, and special care homes. Future direction includes expanding the age and gender population affected by MTCT HIV. Therefore, as it is crucial for social change, there should be an alliance between psychologists and medical professionals to target and help paediatric HIV population.

REFERENCES


