



## CLINICAL RESEARCH:

### Forensic Insights: Unmasking Technology-Assisted Child Sexual Abuse Through the Lens of Child Healthcare Workers

Visiones forenses: descubriendo el abuso sexual infantil asistido por tecnología a través de la óptica de los trabajadores de la salud infantil

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**ABSTRACT:** COVID-19 infection prevention measures have enhanced risks of abuse for children, especially in terms of high vulnerability to technology. Despite the rise in technology-assisted child sexual abuse (TA-CSA), little research has been conducted on Child Healthcare Workers' perceptions beyond reporting on young people's experiences. This novel study aims to understand how Childcare Workers perceive technology-assisted child sexual abuse, risks, impacts, therapeutics, and perceptions of need. Qualitative research methodology was used for the study. Child healthcare workers volunteering to participate in the study were approached by a purposive sampling strategy and interviewed in person. Field notes were taken to record the conversation. Grounded theory approach was used to analyze the results to eliminate bias associated with presumptive knowledge from literature. Participants reported an exponential rise in cases of TA-CSA during the COVID-19 pandemic. Impacts of TA-CSA such as self-blame, fear of offender, and inability to manage emotions were the most common and peculiar aspects of TA-CSA in this population. Though the childcare workers recognized the risks and impacts of TA-CSA, they were unaware of the need for distinct frameworks and therapeutic approaches essential for handling cases of TA-CSA. Complexities in TA-CSA necessitate an algorithm in addressing TA-CSA as a separate entity. Therapy should be focused on the specific impacts of TA-CSA. Further, the observations of the study stipulate the exigent shift in community perspective from blaming the victim to shaming the offender.

**KEYWORDS:** Child care workers; Child sexual abuse; Online; Perspectives; Technology-assisted.



**RESUMEN:** Las medidas de prevención de la infección por COVID-19 han aumentado los riesgos de abuso para los niños, especialmente en términos de alta vulnerabilidad a la tecnología. A pesar del aumento en el abuso sexual infantil asistido por tecnología (TA-CSA), se ha realizado poca investigación sobre las percepciones de los Trabajadores de la Salud Infantil más allá de informar sobre las experiencias de los jóvenes. Este nuevo estudio tiene como objetivo comprender cómo perciben los Trabajadores de la Salud Infantil el abuso sexual infantil asistido por tecnología, los riesgos, impactos, terapias y percepciones de necesidad. Se utilizó una metodología de investigación cualitativa para el estudio. Los trabajadores de la salud infantil que se ofrecieron como voluntarios para participar en el estudio fueron abordados mediante una estrategia de muestreo intencional y entrevistados en persona. Se tomaron notas de campo para registrar la conversación. Se utilizó un enfoque de teoría fundamentada para analizar los resultados y eliminar el sesgo asociado con el conocimiento presunto de la literatura. Los participantes informaron un aumento exponencial en los casos de TA-CSA durante la pandemia de COVID-19. Los impactos de TA-CSA, como la autoacusación, el miedo al agresor y la incapacidad para gestionar las emociones, fueron los aspectos más comunes y peculiares de TA-CSA en esta población. Aunque los trabajadores de la salud infantil reconocieron los riesgos e impactos de TA-CSA, desconocían la necesidad de marcos distintos y enfoques terapéuticos esenciales para manejar los casos de TA-CSA. Las complejidades en TA-CSA requieren un algoritmo para abordar TA-CSA como una entidad separada. La terapia debe centrarse en los impactos específicos de TA-CSA. Además, las observaciones del estudio estipulan el cambio exigente en la perspectiva de la comunidad de culpar a la víctima por avergonzar al agresor.

**PALABRAS CLAVE:** Trabajadores de cuidado infantil; Abuso sexual infantil; En línea; Perspectivas; Asistido por tecnología.

## INTRODUCTION

Technological innovation and accessibility to internet-enabled mobile devices have created significant impacts on societies around the world. Children have increased access to the internet at an earlier age which creates a possibility of misuse and exploitation. COVID-19 infection prevention measures such as lockdowns has been linked to a surge in the activity of offenders on the surface and the dark web enhancing the risks of technology-assisted child sexual abuse (TA-CSA) (1). A recent study investigating the psychological effects of lockdown on young school-going children reported that 5.3% of children aged between 13-16 years experienced at least one irrelevant online sexual interaction, mostly for the first time in life (2). Children are unaware of the risks involved in the inappropriate use of technology, wherein images

and large files are permanently stored in the internet. An alarming rise in self-generated sexual images is outlined by ECPAT, with 44% involving non-puberty-generated children (3). With a large population of children falling vulnerable to technology-assisted child sexual abuse, it is of at utmost importance to effectively combat this social evil in terms of sexual education, safe use of technology, counseling, recovery, and rehabilitation. In a survey conducted among 30 countries by the Child safety online index, India ranked 9th best in online safety for children but stands second in the extent of cyber risks, implying the wide range of cyber-crimes and relatively low efficiency in tackling the issue (4). Despite the rise in technology-assisted child sexual abuse (TA-CSA), research in this field has focused primarily on the voices of victims, their experiences, and liabilities. There exists a knowledge gap in addressing the rising plight of

TA-CSA from childcare workers' point of view. The present study aims to understand the perceptions of childcare workers on TA-CSA, risks, impacts, therapeutic approaches, and needs to address the problem scenario.

## MATERIALS AND METHODS

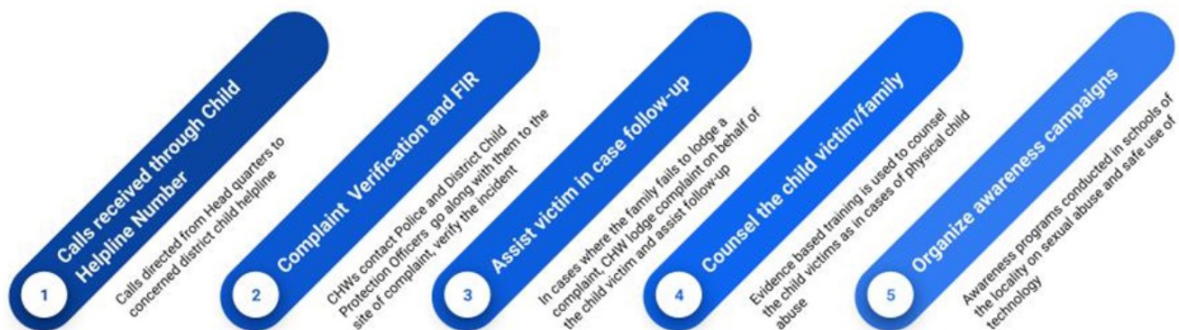
### STUDY DESIGN AND SAMPLING

A qualitative descriptive study, approved by the Institutional Ethical Committee (EC/2022/1108/CR/63), was undertaken among childcare workers in the Southern State of India. Childcare workers from the Child Care Foundation and various other NGOs recognized by the Government were included in the study. The model of approach in child sexual abuse followed by the childcare workers is depicted in Figure 1. After conducting a pre-assessment regarding the number of child sexual abuse cases reported during the ongoing COVID-19 pandemic, the study investigator found that there was an

exponential rise in the number of reported cases of TA-CSA.

### DATA COLLECTION AND ANALYSIS

Semi-structured qualitative interviews were conducted among thirty childcare workers in the Southern State of India. Informed verbal consent was obtained from the participants. The interviews lasted for about 30 to 40 minutes. Although all questions were asked in English, interviewees responded in English or Tamil based on their personal preferences. Each interview was recorded using field notes. The research design was based on perceptions and approaches of childcare workers to TA-CSA. A state where no new categories or themes could be drafted from the interviews after interviewing thirty participants was considered thematic saturation. Participants' perception of TA-CSA was conceptualized using inductive reasoning. Raw data procured were coded into categories based on emergent themes.



**Figure 1.** Framework of approach in Child Sexual Abuse.

## RESULTS

Participants included healthcare workers and counsellors from the Southern State of India. Themes from the inter-interviewee responses included: apprehension of childcare workers to TA-CSA, risks and impacts, therapeutic approaches, and perceptions of need. Quotations have been included to supplement descriptions of childcare workers' interviews.

### APPREHENSION OF CHILD CARE WORKERS TO TA-CSA

Child care workers (CCW) recognized TA-CSA as those sexual abuses that happen to children either solely online or physical abuses assisted by technology. Children are exposed to internet communication as a mandatory requirement for online education during lockdown as well as through inquisitiveness. Social media, online classes, online games, image and video sharing, viewing porn, etc. are few precarious sources of online exploitation specified by CCWs. Interviewees also reported a high rise in the number of TA-CSA cases during COVID-19 pandemic, especially hiked from the period of lockdown in COVID emergency.

"We used to receive around one or two cases of online child sexual abuse before COVID-19, but during the COVID-19 pandemic we receive more than ten cases per month....." (10).

TA-CSA is perceived by CHW as having greater impacts and more of immediate concern than physical child sexual abuse elements. CHWs approached TA-CSA using the same framework

designed by them for handling cases of physical child sexual abuse. Many CHWs considered modifying the existing framework to better handle cases of TA-CSA as per the needs.

### RISKS AND IMPACTS OF TA-CSA

Permanence of images, deceit about abuser, re-victimisation, emotional imbalance, self-blame, depression, low self-esteem, fear of offender and aggressive behaviour towards parents were some of the grounds for risks and impacts of TA-CSA. Impacts on the victims of TA-CSA was found to be largely influenced by the socioeconomic status of the family, peer relationships and society which led to harmful behavioural changes in young victims, challenging their recovery from the impact.

"Family environment plays a significant role in molding the child characteristics. Crimes are higher in families where the parent indulges in multiple relationships, exposing the child's innocence into forced relationships and harmful behavioral changes...." (07).

Safety of children has become questionable in real and virtual world.

### THERAPEUTIC APPROACHES AND PERCEPTIONS OF NEED

Differences in therapeutic approach for TA-CSA compared to CSA victims, need for modifications of frameworks in dealing with cases of TA-CSA, effective awareness programs for children and genders equality in sex education were the predominant views on therapeutic approaches and perceptions of need to handle the rising issue

of TA-CSA. Therapeutic approaches and perceptions of need varied among the respondents on the basis of experience in the field and training in therapeutic counselling. Counsellors in the study emphasized the timely change in directing the children awareness programs towards the impacts and struggles caused by TA-CSA.

“Awareness programs are being conducted in schools to educate the children on safe use of technology emphasising the dos and don’ts. Children with curiosity to technology, vulnerably attempt to try the don’ts in an attempt to know the unknown. To overcome this scenario, awareness programs should be focused on narrating the impacts and struggles faced by victims of TA-CSA, which shall imply a right alarm to technosense.....” (17).

## DISCUSSION

The World Health Organization (WHO) defines Child Sexual Abuse (CSA) as “the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or for which the child is not developmentally prepared and cannot give consent, or that violates the laws....” (5). There are several ways in which internet or technology can be exploited to sexually abuse children such as involving a child in sexual chat, creating objectionable content, on-camera abuse of the children, sexual solicitation, sharing abusive material, blackmailing the minor, and others (6). It is the need of the hour for the childcare workers and the public to be aware of the child sexual abuse materials in order to keep the younger minds off from being trapped into it. Findings based on the perceptions of the childcare workers on risks and impacts of technology assisted child sexual abuse revealed that the risks were driven by curiosity of the young children towards technology and the need for affection ultimately resulting in adverse behavioural changes.

## APPREHENSION OF CHILD CARE WORKERS TO TA-CSA

CHILDLINE stated to have received approximately 92,000 calls on child violence and abuse during a span of just eleven days in lockdown (7). Participants of the study also quoted an exponential rise in the number of reported cases of TA-CSA during the COVID-19 pandemic. The Childcare workers considered technology assisted child sexual abuse as having greater impacts and more of immediate concern than physical child sexual abuse. A similar observation was reported in a study by Jonsson et. al. in which adolescents with experience of TA-CSA reported poorer psychological health than adolescents with experience of penetrative offline abuse (8). Innocence of children is being played as a trump card by abusers as the children do not even recognise their experience as abuse. Factors such as permanence of images, probability of re-victimisation, deceit about observer, curiosity of children towards technology add to the complexity of TA-CSA.

## RISKS AND IMPACTS OF TA-CSA

Large number of studies described in literature demonstrates the negative impacts of child sexual abuse such as anxiety, aggression, substance misuse, eating disorders, suicidal behavior, self-harm, post-traumatic stress disorder, interpersonal distrust and relationship difficulties (9-11). There are only a few studies describing the impact of TA-CSA on child victims. Sexual preoccupation and anger issues were observed among child victims whose physical abuse was shared online (12).

Childcare workers state that child victims are psychologically affected by technology assisted child sexual abuse which imparts self-blame, depression and low self-esteem, sense of fear of offender, aggressive behavior towards parents, emotional imbalance and borderline personality disorders.

From the observations of the study, the impacts such as self-blame, fear of the offender and borderline personality disorders were considered more predominant amongst the study population.

#### SELF-BLAME

Self-blame is conceptualized as a salient reflection of adjustment problems following sexual abuse. Abuse-specific self-blame may reflect the child's belief that the abuse was their fault (13). Findings from the present study elucidate that parents, family and community play a major role in inflicting the sense of self blame in child victims. Parents' of the victimized children blame the child for being entrapped in TA-CSA as a reflection of their anger and disappointment towards considering the child's act depravity. When the child victim tries to communicate the wrongdoing to the family members, the near and dear inflict the practice of silencing the child fearing ill-treatment from the society. Young children are often humiliated as indulgent in such activity and are discriminated from the society. Offenders also use strategies to hoodwink the child as participating in the sexual act, further enforcing self-blame. Offender utilizes the child's innocence to brainwash the child as participating in the offence. Such offenders involve in activities such as tickling the child during a physical offence and recording the activity as the child's entailment in the offence. Coping up from the abuse was found to be better in male child victims than females, indicating that it is comparatively difficult for female victims to overcome the impact of victimization and are stuck in self-blame.

#### FEAR OF OFFENDER

Children showing curiosity towards technology at an earlier stage of life do not understand the complications related to permanency of images until they fall as a prey to techno-crimes. The permanency of images in the internet hub is of serious concern as it provokes the issue of

re-victimization throughout life. The fear of the offender still having footage of the abuse and the risk that pictures would be circulated could cause distress and a feeling of utter helplessness (14). In most instances, there is a web of deceit about the observer. Unmasking the offender has been successful only in a handful of instances, and marks the arduous nature of TA-CSA. Even when the offender is pinned down in a crime, the permanence of images creates an opportunity for re-victimization and repeated blackmail from unknown offenders.

#### AGGRESSIVE BEHAVIOR TOWARDS PARENTS

As an influence of self-blame inflicted on child victims by the family members, children show aggressive behavior towards kith and kin. In such circumstances, the child tends to be secretive to the family, denying reporting of further abuse or continuous blackmail happening to the child victim. Child victims show emotional detachment from unsupportive family.

#### INABILITY TO MANAGE EMOTIONS

Childcare counselors who participated in the study addressed the problem of the inability to manage emotions among the child victims in the population. The issue of falling into multiple relationships and pleasure-seeking tendencies was said to be observed in child victims aged around 12-18 years. This is of serious concern as it leads to irreparable personality changes in the children who stand as the future of our nation. Factors that lead to such perilous personality changes revolve around the mental health and well-being of the child in a family. Parents spend most of their time in earning a living and try to satisfy the needs of their children by buying new products. Parents fail to spend quality time with their children. Children are often left unmonitored in a locked room with technological devices like cellphones, which pave the way to unknowingly fall prey to

techno-crimes. The family environment plays a significant role in molding the child's characteristics. Crimes are higher in families where the parent indulges in multiple relationships, exposing the child's innocence to forced relationships and harmful behavioral changes. Counselors in the study highlighted a social problem specific to the area of study, where male parent detaches from the female child once the child attains puberty. As children these days attain puberty at a younger age, 11-13 years old child is unable to understand the sudden drifting apart behavior of the male parent which implants a feeling of longing for affection in the female child. Childcare workers in their experience observed that such children, in deep search for love and affection from outsiders, are more likely to be trapped in TA-CSA.

#### THERAPEUTIC APPROACHES AND PERCEPTIONS OF NEED

Amongst the number of therapeutic approaches in practice, trauma-focused cognitive behavioural therapy is considered to be most effective in cases of child sexual abuse. Evolving therapeutic modalities such as game-based cognitive behavioural therapy, eye movement desensitization reprocessing, brain-spotting, family therapy, and animal-assisted therapy also offer relatable therapeutic effects (15). In the present study, the therapeutic approach of childcare workers toward victims of TA-CSA was predominantly rooted in evidence-based training. Dialectical behavioural therapy helps to adaptively regulate intense negative emotions and shift unhealthy relationship patterns which may serve to effectively counsel victims of online sexual abuse experiencing borderline personality disorders (15). Participants elicited that there were no specific therapeutic approaches used for victims of TSA-CSA compared to those of physical child sexual abuse. Thrust areas such as negative beliefs, shame and body esteem should be prioritized in addressing victims of TA-CSA

(15). Few participants addressed the need for the formulation of a discrete framework to address the cases of technology-assisted child abuse.

#### LIMITATIONS

This study had a small sample size and was broad in scope. Though the sample size was enough to reach thematic saturation, our participants were recruited from only one district of India. Therefore, a full picture of the child care management in cases of TA-CSA could not be represented, leading to selection bias.

#### CONCLUSION

Role of family in spending quality time with children and observation of the children during technology use can play a significant role in mitigating crimes involving TA-CSA. Complexities in technology assisted child sexual abuse necessitate an algorithm in addressing TA-CSA as a separate entity. Systematic approaches such as the COmbating Paedophile Information Networks in Europe (COPINE) scale used in identifying indecent images of children can be adopted in India to tackle the issue of online child sexual abuse. Forensic experts can be up-skilled in the process of scoring abusive images and validating them in the court of law. Further, the observations of the study stipulate the exigent shift in community perspective from blaming the victim to shaming the offender.

#### AUTHOR CONTRIBUTION STATEMENT

Conceptualization and design: V.M. and S.R.G.

Literature review: V.M. and L.B.L.

Investigation and data collection: V.M., S.R.G. and L.B.L.

Interpretation and analysis of data: V.M., S.R.G. and L.B.L.

Writing-original draft preparation: V.M. and S.R.G.

Writing review and editing: V.M., S.R.G. and L.B.L.

## CONFLICTS OF INTERESTS

The authors declare that they have no conflicts of interest.

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