Original Research Article

Child Abuse as Predictor of Learning Disabilities

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ABSTRACT

The study intended to examine the predicting role of Child Abuse in Learning Disabilities (LDs). Initially, a total of 210 students, age ranged 11-18 years, enrolled in various schools of Gorakhpur district were screened out and from this pool, finally 60 participants, diagnosed with Learning Disability, were selected for the present study. Diagnostic Test of Learning Disability (DTLD) was applied to identify the level and forms of LD in participants. Further, Child Abuse Checklist (S. Pandey, 2012) was used to determine the level and various forms of abuse. Obtained scores were analyzed in terms of Bivariate and Multivariate statistical techniques.
Results evinced the pervasive role of child abuse in learning disability. More specifically, correlation results revealed strong positive relationships of different forms of child abuse i.e. physical abuse, psychological abuse, sexual abuse, physical neglect, emotional neglect and educational neglect, with various forms of LD i.e. Dyslexia (reading disability), Dysgraphia (writing disability) and Dyscalculia (mathematical disability). Further, regression results have proved the contributing roles of different forms of child abuse, neglect and age in Learning Disability and its various domains. Findings are discussed.

KEYWORDS: Age, Child Abuse, Learning Disability, Dyslexia, Dysgraphia and Dyscalculia.

INTRODUCTION

Early Childhood experiences play a crucial role in overall development of children even in later stages of life. In the early years of children's life, pivotal developmental milestones and adaptive experiences shape the foundation for their future growth and learning. During this dynamic period of growth children rapidly develop essential motor skills, language abilities, and social interactions. However, for some children, these experiences can be fraught with repeated challenges that affect their overall well-being. These negative experiences can manifest in various ways, such as cognitive and behavioural issues or social withdrawal (Masten, 2014)[1]. One of the critical aspects to consider in this context is learning disability. Learning disability is a common problem that is more likely to occur in children and adolescents, who have negative childhood experiences early in life. One of the major contributing factors associated with these negative experiences is child abuse. According to researchers, abuse, and neglect in the early years of life can seriously affect the developmental capacities of children, especially in the critical areas of speech and language (Pandey, 2007;2021)[2-3]. This way, child abuse can act to increase vulnerability towards learning disability. Therefore, it is essential to study the predicting role of child maltreatment (abuse) in Learning Disabilities (LDs).
Learning disabilities are neurological conditions that impact how a child processes

information, making certain academic tasks particularly challenging despite their efforts. These disabilities can contribute to a cycle of negative experiences, where ongoing difficulties exacerbate emotional, behavioural and cognitive issues (Lerner, 1985) [4]. The impact of learning disabilities (LD) on children is profound, leading to notable social and emotional challenges. Learning disability can take many forms like Dyslexia (reading disability), Dysgraphia (writing disability) and Dyscalculia (mathematical disability). Such disabilities may be manifested by specific delay in early development. These disabilities create a gap between the true potential and day to day productivity and performance. Learning disabilities (LD) pose significant challenges to children's development, affecting their educational, emotional, and behavioural outcomes. These disabilities are prevalent and multifactorial, often leading to behavioural problems that are three to four times more frequent than those observed in non-disabled children (Baker et al., 2002; Khatoon & Pandey,2022: Mittal et al., 1977; Shaywitz, 1998; Volkmar & Klin, 2004;) [5-6-7-8-9]. The causes of learning disabilities are diverse, including educational failure, cognitive disorders, and the influence of parental behaviours and attitudes towards the disorder (Donatelli et al., 2010; Ganji, 2013; Khanjani & Hodavand, 2013; Lorber & Egeland, 2009; Sheikhi et al., 2015). [10-11-12-13-14] As children with LD grow and develop, these problems often increase. Problems such as attention difficulties, motor coordination challenges, and emotional immaturity become more definite, resulting in long-term effects on self-image, peer relationships, and social interactions (Karande et al., 2009). [15]

Learning disabilities can arise or prompted from a combination of biological, psychological, and social factors, each playing a significant role in shaping a child's learning journey. Among these factors, child abuse/child maltreatment is a major factor that impedes a child/adolescent's learning experiences and outcomes. Child maltreatment is a crucial social psychological problem identified at high threshold around the globe and challenging the very existence of child population. It consists of both child abuse and neglect. Researchers have identified that child abuse occurs across socio-economic, religious, cultural, racial, and ethnic groups (Pandey, 2007; 2021; Usakli, 2012) [2-3-16]. The World Health Organization (1999) [17] defined *Child Maltreatment as, 'All forms of physical and/or emotional ill-treatment, sexual-abuse, neglect or negligent treatment or exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power'.* In general, child abuse is the ill treatment of a child. It may be in the form of physical, emotional, or sexual abuse. These forms of abuse may also be recognized as the exploitation of a child, as well as the failure to properly care for a child, otherwise known as neglect. Children that are subjected to abuse usually experience harm to their health, welfare, and self-respect. Child abuse is committed in epidemic proportions in India. Every year, approximately one million children are deprived of a normal, harm-free childhood. Instead, they are subjected to the horrors of maltreatment in their formative stages.

Child abuse can include physical abuse, emotional abuse, sexual abuse, different forms of neglect, or any combination thereof (Thornberry et al. 2013). [18] There are several researches signifying the deleterious consequences of maltreatment on child's overall development (Pandey, 2021; Thornberry et al. 2013). [3-18] Researchers have found that early-life abuse and neglect can have a significant impact on children's developing abilities, particularly in the crucial domains of cognitive processes, speech and language (Pandey,2007; Wolfe, 1999). [2-19] According to researchers, any kind of disability can act to increase vulnerability to abuse as a function of society's response to disability or disability itself being the cause of abuse. Researcher

has evinced a strong association between child abuse and learning disability (Gilbert et al, 2009). [20] Perhaps child abuse causes learning disability; perhaps learning disability places a child at particular risk for being abused; perhaps both are true. Children with learning disability have an increased vulnerability to abuse (Brown & Craft, 1992) [21] because of dependence on other people for personal care; an 'imbalance of power' between the carer and the person being cared for; difficulties in communicating; lack of sexual knowledge and assertiveness; and guilt and shame at being disabled (Sinason, 1993). [22] Current data on incidence and prevalence of maltreatment in children with disabilities are limited by varying definitions of disability and lack of uniform methods of classifying maltreatment. There is concern that the incidence of child abuse and neglect is underreported in part because many children with disabilities have communication difficulties and cannot directly report problems. Nonetheless, children with disabilities and special health care needs are at increased risk of child maltreatment.

On the basis of national data from 2015 [23], child sufferers with a disability accounted for 14.1% of all victims of abuse and neglect. In this report, children with the several conditions were considered to have a disability like intellectual disability (ID), severe emotional disturbance, visual or hearing impairment, learning disability, physical disability, behaviour problem, or a few other chronic medical conditions. It was believed that children with such conditions are undercounted because not every child received a clinical diagnostic assessment when child maltreatment was suspected. Child abuse and neglect is reported in 3% to 10% of the population with disabilities. The rate of child abuse and neglect is at least 3 times higher in children with disabilities than in the common children. In a recent study by the Federal Bureau of Justice Statistics, during the period from 2011 to 2015, among all children older than 12 years who had disabilities, adolescents between 12 and 15

years of age had the highest rate of violent victimization. Child maltreatment may result in the development of disabilities, which in turn can precipitate further abuse (Pandey & Shukla, 2024). [24] Abusive head trauma, for example, is known to cause disabilities in children. The majority of survivors of abusive head trauma have developmental delays, seizures, motor impairments, feeding difficulties, and later behavioral and educational dysfunction, with only 28% having no impairment. Vision loss can result from occipital cortical injury and optic nerve injury. Neglect is associated with short-term and long-term effects on children's cognitive, socioemotional, and behavioral development. Neglect that occurs early in life can have more profound effects on development (Pandey & Shukla, 2024).[24]

A close perusal of review of studies evinced the detrimental consequences of different forms of child abuse on development of children. However, the relationship between child abuse and learning disability is a less investigated issue especially in Indian context. Against this backdrop present study was conducted to investigate the predicting role of child abuse in learning disability and its domains.

Objective
This study was conducted with following objectives:
- To investigate the relationship between Child abuse and Learning disabilities.
- To find out the predicting roles of different forms of Child Abuse and Age in various types of Learning Disability.

Hypotheses:
Based on above objectives, following hypotheses were created for investigation.
- Previous studies have indicated a close link between child abuse and learning disability (Brown & Craft, 1992 Pandey,2007). [21-2] Thus, it was hypothesized that there would be a positive relationship between different forms of child abuse and learning disabilities.

- Earlier studies evinced that child maltreatment exerts influence on occurrence of learning disabilities (McLaughlin et al.2014; Pandey,2007;2025). [25-2-26] Therefore, it was hypothesised that various forms of child abuse and age would play contributing role in learning disabilities.

MATERIAL & METHOD
Participants
Primarily, this research involved a total of 210 students enrolled in various schools of Gorakhpur district. From this pool, 60 participants, Diagnosed with Learning Disability, were selected for the present study. The identification of the learning-disabled group was done by the Diagnostic Test of Learning Disability (DTLD). The age range was divided into two groups, Pre adolescents (11-14 years) and Adolescents (15-18yrs). It was a representative sample of the kind of students who came from different schools of Gorakhpur District. Sample selection was done by using stratified random sampling technique. Additionally, to ensure participation of LD students, the purposive sampling technique was also employed.

Measures
In the present study a set of measuring tools was used. A brief description of the measures is given below.

- **Child Abuse Checklist (CAC):** The CAC developed and standardized by S. Pandey (2012) [27] was used to assess the level of and forms of child abuse and neglect. This checklist contains 110 items related to physical abuse (23 items), psychological abuse (24 items), and sexual abuse (23 items) and neglect i.e., physical neglect (13 items), emotional neglect (13 items) and educational neglect (15 items). The CAC has 4-point scale ranging from 1 to 4. The score could range from 79 to 395. Total summated scores in each area denote the magnitude of abuse and neglect in specific area and on the basis of grand total, abuse as a whole was determined.

- **Diagnostic Test of Learning Disability (DTLD):** In order to identify the cases of learning disability, Diagnostic Test of Learning Disability (DTLD) constructed by Swarup and Mehta (1991) [28] was used. This comprehensive diagnostic tool comprises 100 items which diagnose learning disabilities in ten distinct areas ranging from Auditory/Visual Perception to Cognitive abilities. These domains are further delineated into ten sub-tests, namely: Eye-hand Co-ordination (EHC), Figure Ground Perception (FG), Figure Constancy (FC), Position-in-Space (PS), Spatial Relations (SR), Auditory Perception (AP), Memory (M), Cognitive Abilities (CA), Receptive Language (RL), and Expressive Language (EL). Each subtest in the assessment was scored individually, following the instruction given in the manual. A total score of 40 or below indicated a learning disability and helped classify students into LD and Non-LD group.

- **Specific Learning Disability Comprehensive Diagnostic Battery (SLD: CDB):**
  The Specific Learning Disability Comprehensive Diagnostic Battery, developed by Mehta and Sagar (2013) [29] was used to assess specific learning disabilities (Dyslexia, Dysgraphia, and Dyscalculia) in students. This diagnostic battery is used to identify and understand the unique learning challenges faced by children of age group 6-13 years. It includes three sub-tests i.e. Reading Test, Writing Test and Arithmetic Test which collectively offer a detailed profile of a child's learning abilities and challenges.

- **Learning Disabilities Battery (LDB):**
  The Learning Disabilities Battery (LDB) was used to identify specific learning disabilities in participants age ranged from 13-16 years. This is a comprehensive tool designed by Bhargava and Bharadwaj [30] specifically

for adolescents aged 13-16 years. It is divided into three distinct parts, Reading Disability (Dyslexia), Writing Disability (Dysgraphia), and Mathematical Disability (Dyscalculia).

PROCEDURE

The study was conducted in multiple phases. Firstly. various schools situated in Gorakhpur District were approached and approval was taken from the school authorities. Afterwards students were contacted in leisure time and briefed about purpose of the study. Then they were given a booklet containing a set of measuring tools i.e. Child Abuse Checklist (CAC), Diagnostic Test of Learning Disability (DTLD), and Specific Learning Disability tests (Specific Learning Disability Comprehensive Diagnostic Battery and Learning Disabilities Battery) and they were requested to respond on each measure one by one. After completion of responses on various measures, data were collected and participants were thanked for cooperation.

STATISTICAL ANALYSIS

Data obtained from students were scored according to prescribed rules given in manuals. Obtained scores were analyzed in terms of Bivariate and Multivariate technique by using SPSS 21st Version.

RESULTS

Firstly, the level and forms of child abuse were determined on the basis of scores obtained on Child abuse checklist (CAC). Further, Learning disabled children were diagnosed using Diagnostic Test of Learning Disability (DTLD) and Specific Learning Disability tests (Specific Learning Disability Comprehensive Diagnostic Battery and Learning Disabilities Battery) were applied to identify the level and different forms of LD. Afterwards, scores were treated statistically in terms of correlation and regression analyses. The correlational analysis was done to get insight into the relationship between different forms of child abuse i.e. physical abuse, sexual abuse, psychological abuse, emotional neglect and educational neglect and various types of learning disabilities i.e. Dyslexia (reading disability), Dysgraphia (writing disability) and Dyscalculia (mathematical disability). Moreover, to access the predicting role of child abuse and age in LD, regression analysis was done. First correlation results are reported followed by findings of regression analysis. Obtained results are displayed in Tables and Figures and interpreted in the following section.

1. Correlational Analysis

Relationship between Child Abuse and Learning Disabilities: Correlations were computed between types of child abuse and LDs. It is apparent from Table 1 that different forms of child abuse were found positively correlated with various types of learning disabilities.

Table 1. Relationship between Child abuse and learning disabilities

	Dyslexia (Reading Disability)	Dysgraphia (Writing Disability)	Dyscalculia (Mathematical Disability)	Overall Learning Disability
Physical Abuse	.611**	.397**	.505**	.788**
Psychological abuse	.336**	.423**	.292*	.381**
Sexual Abuse	.461**	.614**	.480**	.581**
Physical Neglect	.515**	.050	.070	.309*
Emotional Neglect	.723**	.413**	.431**	.734**
Educational Neglect	.708**	.343**	.369**	.807**
Abuse as a whole	.558**	.891**	.774**	.503**

*N= 60, ** P<0.01, * P<0.05,*

It is clear from the Table 1, Physical abuse was found to be positively correlated with reading disability (r=.611, P<.01), writing disability (r=.397, P<.01), mathematical

disability (r=.505, P<.01), and overall learning disability (.788, P<.01). Similarly Psychological abuse was found to be positively correlated with reading disability (r=.336, P<.01), writing disability (.423, P<.01), mathematical disability (.292, P<.05), and overall learning disability (.381, P<.01). Likewise, Sexual abuse found to be positively correlated with all the three types of LD i.e. reading (.461, P<.01), writing (.614, P<.01) and mathematical disability (.480, P<.01) as well as overall LD (.581, P<.01). Likewise, Physical neglect was found to be positively correlated with Reading disability (.515, P<.01) and overall, LD (r=.309, P<.05). Again, Emotional neglect established high positive correlation with all three domains, reading (.723, P<.01), writing (.413, P<.01), mathematical disability (.431, P<.01) and overall, LD (.734, P<.01) as well. Educational neglect was found to be positively correlated with reading disability (.708, P<.01), writing disability (.343, P<.01), mathematical disability (.369, P<.01), and overall, LD (.807, P<.01). Moreover, Abuse as a whole, was found to be positively correlated with all

three domains of LD, reading (.558, P<.01), writing (.891, P<.01), mathematical disability (.774, P<.01) and overall, LD (.503, P<.01) as well. In short, correlation results suggest that the extent of learning disability increased with increasing the level of abuse in adolescents. A strong positive association among forms of abuse and learning disabilities has been proved on the basis of correlation results (Table 1).

2. STEP-WISE MULTIPLE REGRESSION ANALYSIS (SMRA)

To determine the predicting role of various forms of child abuse and age, Step wise multiple regression analysis was done. Obtained results are displayed in tables and graphs and reported in the following section.

- **Prediction of Reading Disability (Dyslexia)**

To determine the role of different forms of child abuse and age in reading disability, step wise multiple regression analysis was done and outcomes are displayed in Table 2 and fig 1.

Table 2 -Step-Wise Multiple Regression Analysis for Reading Disability (Dyslexia) by Child Abuse and Age.

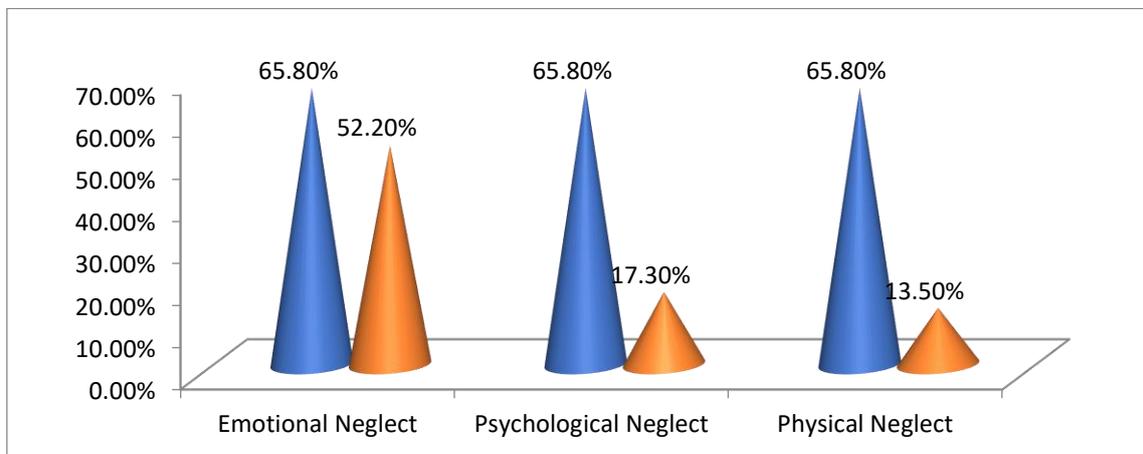| Predictors ▼	Criterion Variable (Reading Disability)					
	R	R^2	R^2 change	Beta (β)	t-value	F value
Emotional Neglect	.723	.522	.522	.723	7.965	63.434**
Psychological Neglect	.912	.831	.173	.535	7.581	91.817**
Physical Neglect	.811	.658	.135	.377	4.746	54.749**

*N= 60, ** P<0.01*

Fig. 1 Prediction of Reading Disability (Dyslexia) by different forms of Child Abuse and Age.

As is apparent from the regression results (Table 2 and Fig. 1), Reading Disability

(Dyslexia) was positively predicted by emotional neglect (β=.723, R^2=.522),

psychological neglect (β=.535, R^2 =.831), and physical neglect (β=.377, R^2 =.658). Emotional Neglect was found strongest predictor of dyslexia, which contributed maximum 52.20% variance followed by psychological neglect which contributed 17.30% variance and physical neglect contributed 13.50% of variance in the criterion variable but the composite contribution of all three variables were found 65.8% of variance to reading disability.

- **Prediction of Writing Disability (Dysgraphia)**

To determine the role of different forms of child abuse and age in writing disability, stepwise multiple regression analysis was done and results are displayed in Table 3 and fig 2.

Table 3. Step-Wise Multiple Regression Analysis for Writing Disability (Dysgraphia) by Child Abuse and Age

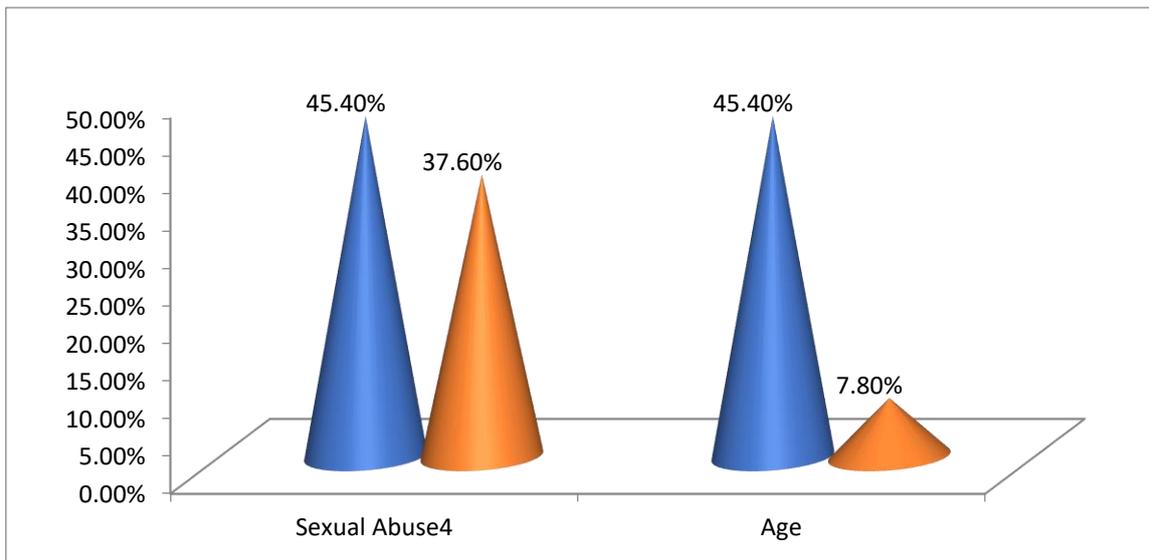| Predictors ↓	Criterion Variable (Writing Disability)					
	R	R^2	R^2 change	Beta (β)	t-value	F value
Sexual Abuse	.614	.376	.376	.614	5.918	35.019**
Age	.674	.454	.078	.280	2.845	23.699**

*N= 60, ** P<0.01.*

Fig. 2 Prediction of Writing Disability (Dysgraphia) by different Domains of Child Abuse and Age.

As regression results indicate (Table 2 and fig. 2), writing disability is positively predicted by sexual abuse (β=.614, R^2 =.376) and age (β=.280, R^2 =.454). Sexual abuse was found the strongest predictor of writing disability which has contributed maximum 37.60% variance followed by age which contributed 7.80% variance in the criterion variable. However, the composite contribution of both variables was found 45.4% of variance to writing disability.

- **Prediction of Mathematical Disability (Dyscalculia)**

To determine the predicting role of different forms of child abuse and age in mathematical disability, step wise multiple regression analysis was done and outcomes are displayed in Table 4 and fig 3.

Table 4. Step-Wise Multiple Regression Analysis for Mathematical Disability (Dyscalculia) by Child Abuse and Age

Predictors	Criterion Variable (Mathematical Disability)					
	R	R^2	R^2 change	Beta (β)	t-value	F value
Physical Abuse	.505	.255	.255	.505	4.451	19.815**
Sexual Abuse	.594	.353	.098	.338	2.935	15.517**
Age	.639	.409	.056	.239	2.306	12.901*

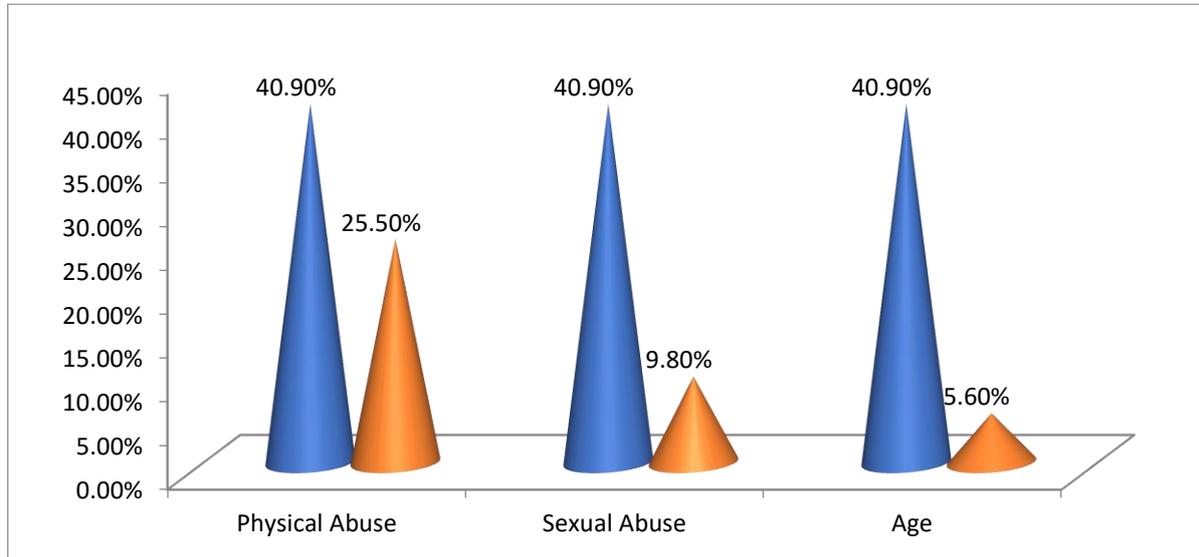*N= 60, ** P<0.01, * P<0.05*

Fig. 3 Prediction of Mathematical Disability (Dyscalculia) by different Domains of Child Abuse and Age.

As indicated in regression results (Table 4 and Fig. 3), Mathematical disability is positively predicted by physical abuse (β=.505, R^2 =.255), sexual abuse (β=.338, R^2 =.353) and age (β=.239, R^2 =.409). Physical abuse was found the strongest predictor of dyscalculia which explained 25.50% of variance followed by sexual abuse which predicted 9.80% of variance and age which contributed 5.60% of variance to criterion variable. Nevertheless, the composite contribution of all three factors were found 40.9% of variance to mathematical disability.

- **Prediction of Overall Learning Disability**

To examine the contributing role of different forms of child abuse and age in overall learning disability, stepwise multiple regression analysis was done and findings are displayed in Table 5 and fig 4.

Table 5. Step-Wise Multiple Regression Analysis for Learning Disability (Overall) by Child Abuse and Age.

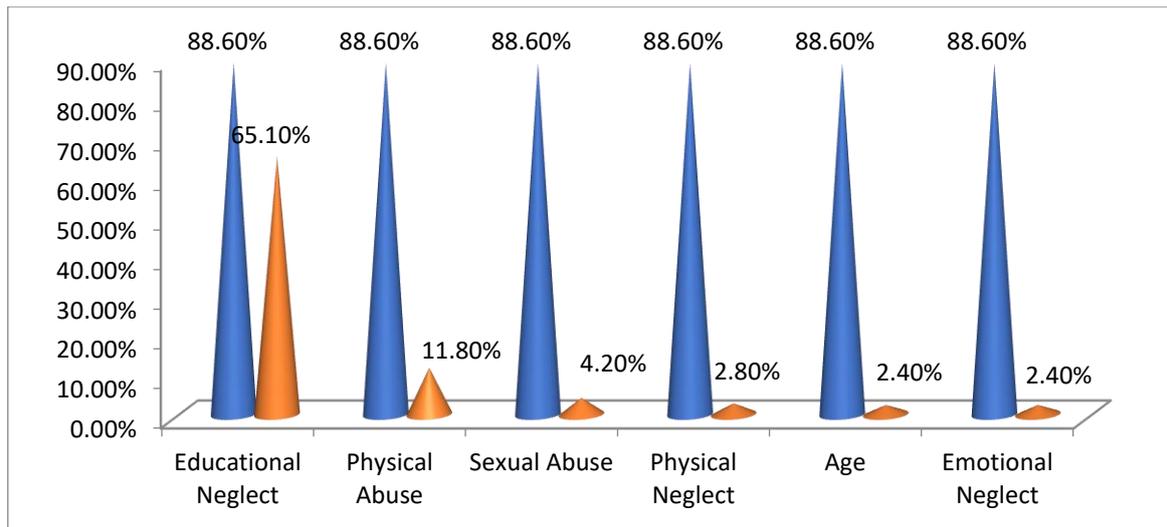| Predictors	Criterion Variable (Overall Learning Disability)					
	R	R^2	R^2 change	Beta (β)	t-value	F value
Educational Neglect	.807	.651	.651	.807	10.398	108.118**
Physical Abuse	.877	.769	.118	.455	5.391	94.753**
Sexual Abuse	.900	.811	.042	.230	3.512	79.846**
Physical Neglect	.916	.839	.028	.180	3.104	71.527**
Age	.929	.863	.024	.160	3.069	67.862**
Emotional Neglect	.942	.886	.024	.475	3.332	68.982**

*N= 60, ** P<0.01*

Fig 4 Prediction of Mathematical Disability (Dyscalculia) by different Domains of Child Abuse and Age.

As exhibited in regression results (Table 4 and Fig. 4), Overall learning disability was positively predicted by six factors, i.e. educational neglect (β=.807, R^2 =.651), physical abuse (β=.455, R^2 =.769), sexual abuse (β=.230, R^2 =.811), physical neglect (β=.180, R^2 =.839), age (β=.160, R^2 =.863), and emotional neglect (β=.475, R^2 =.886). Educational neglect was found to be the strongest predictor of overall LD that contributed 65.1% of variance followed by physical abuse which contributed 11.8%, sexual abuse 4.2%, physical neglect 2.8%, age 2.4% and emotional neglect has explained 2.4% variance in criterion variable. However, the composite contribution of all predictor variables was found 88.6% of variance to Overall Learning Disability. In sum, present findings based on correlation and regression analyses evinced the significant role of child abuse in enhancing learning disabilities in children.

DISCUSSION
The study aimed to investigate the role of child abuse in learning disabilities. Findings of the study evinced pervasive influence of child abuse on various types of Learning Disability. The correlation results evinced strong positive relationships of various forms of child abuse i.e. physical abuse, psychological abuse, sexual abuse, physical neglect, emotional neglect, educational neglect, and abuse (total), with learning disabilities i.e. Dyslexia (reading disability), Dysgraphia (writing disability) and Dyscalculia (mathematical disability). These findings evinced that with increasing abusive experiences the level of LD also increased. Further, regression results have proved the positive contributing role of different forms of child abuse and age in learning disabilities. More specifically, learning disability was found positively predicted by educational neglect, physical abuse, sexual abuse, physical neglect, and emotional neglect. Whereas educational neglect emerged as the strongest predictor of learning disability. These findings confirm the significant role of different types of Child abuse in exhibition of learning disabilities.

Findings of the study have been supported on the basis of a sizeable number of studies. In a study, Brown and Craft (1992) [21] found similar results in their research and stated that children suffering from various kinds of learning disability have an increased vulnerability to abuse. Sinason (1993) [22] also proved similar finding in their study and acknowledge that children with disabilities have high risk of getting abused because of difficulties in communication and lack of support by their parents and caregiver. Child maltreatment, encompassing various forms of abuse and neglect, has a profound and overarching impact on the development of learning disabilities (LDs). A meta-analysis conducted by Veltman and Browne (2001)

[31] provides compelling evidence that child maltreatment broadly impairs academic functioning, with consistent links to learning difficulties across domains. Their analysis highlights how exposure to physical, emotional, and sexual abuse, as well as neglect, disrupts the cognitive processes critical for academic tasks, including attention, memory, and problem-solving. These disruptions often manifest as deficits in reading, writing, and mathematical reasoning, which are hallmarks of LDs such as dyslexia, dysgraphia, and dyscalculia. Various types of child abuse have been found to have serious adverse impacts on learning disabilities, which are presented in following section.

The findings of present research indicate a close positive role of various forms of child abuse in learning disabilities i.e. physical abuse, psychological abuse, sexual abuse, physical neglect, emotional neglect and educational neglect. Often, physical abuse during critical developmental periods can disrupt neural pathways essential for learning, thereby increasing the risk of developing Learning Disability. Moreover, physical abuse has been associated with deficits in connectivity between neural networks. De Bellis et al. (2002) [32] found that physically abused children displayed reduced integration between the prefrontal cortex and limbic regions, which are vital for emotional regulation and cognitive control. Shonkoff et al. (2012) [33] emphasized that early adversity, including physical abuse, creates a foundation of "toxic stress," which permanently alters the architecture of the developing brain. Pandey (2025) [26] also identified contributing role of physical abuse in enhancing learning disabilities.

Sexual abuse during childhood has profound effects on psychological well-being and cognitive functioning, significantly increasing the risk of learning disabilities (LDs). The trauma associated with sexual abuse often leads to heightened psychological distress, including post-traumatic stress disorder (PTSD), depression, and anxiety, all of which interfere with cognitive processes required for academic skills (Daignault & Hébert, 2009). [34] These disruptions are particularly detrimental to tasks that require sustained attention, such as writing, which explains the link between sexual abuse and dysgraphia. Eckenrode et al. (1993) [35] highlighted that children who have experienced sexual abuse are more likely to experience academic underachievement due to impairments in emotional regulation, concentration, and processing speed. Sexual abuse has been associated with structural and functional changes in the brain, particularly in regions like the amygdala, hippocampus, and prefrontal cortex (Teicher et al., 2016). [36] These areas are vital for memory, emotional regulation, and executive functioning.

Present findings also indicate that Neglect was found positively linked with LDs. Neglect in its various forms—emotional, educational, and physical—has far-reaching effects on children's cognitive and academic development, significantly increasing the risk of learning disabilities (LDs), (Pandey,2007). [2] McLaughlin et al. (2014) [25] demonstrated that emotional neglect disrupts the development of language and literacy skills, particularly reading abilities. The absence of supportive interactions and conversations during critical developmental periods limits vocabulary acquisition and phonemic awareness, Furthermore, chronic emotional deprivation leads to difficulties in self-regulation, which exacerbate the challenges associated with dyslexia and other learning difficulties. Educational neglect directly affects a child's ability to acquire foundational academic skills. Kurtz et al. (1993) [37] highlighted that children who lack exposure to literacy-rich environments and regular educational engagement often experience significant gaps in basic skill acquisition. Neglect creates a compounding deficit, as these children are less likely to develop proficiency in reading, writing, and numeracy, strongly predicting overall learning disabilities. The cumulative effects of neglect are particularly damaging because they create a pervasive environment of

deprivation that hinders both emotional and cognitive growth. Neglected children frequently experience feelings of isolation and insecurity, which further impair their ability to focus and engage in academic tasks. Interventions addressing neglect must prioritize early identification and holistic support, ensuring that affected children receive emotional, educational, and physical resources necessary for overcoming these profound barriers to learning.

Child maltreatment, encompassing various forms of abuse and neglect, has a profound and overarching impact on the development of learning disabilities (LDs). Gilbert et al. (2009) [20] examined the cumulative effects of combined maltreatment forms and concluded that such experiences significantly elevate the risk of global cognitive and learning impairments. Maltreated children often experience a confluence of adverse factors, including chronic stress, inadequate educational support, and disrupted emotional regulation, all of which contribute to poor academic outcomes. The chronic activation of the stress response system in maltreated children has been shown to impair neurogenesis and synaptic functioning, particularly in brain regions such as the hippocampus and prefrontal cortex. These regions are essential for memory consolidation, executive functioning, and attention regulation, underscoring the pervasive impact of maltreatment on learning. In brief, child maltreatment (abuse & neglect) has pervasive influence on enhancing the level of learning disabilities in children.

Another finding of the present study is that Age played a crucial role to increasing learning disabilities (LDs), particularly in the context of maltreatment. Older children who experience prolonged exposure to adverse environments often show compounded negative effects, as the cumulative duration of maltreatment intensifies its impact on cognitive and academic outcomes. Manly et al. (2001) [38] found that children exposed to maltreatment for longer period, displayed greater disruptions to their cognitive and emotional development, which can exacerbate challenges in writing and mathematical abilities. Prolonged exposure to abuse or neglect during critical developmental periods can lead to chronic stress, which impairs the brain's structural and functional maturation, particularly in regions associated with academic skills such as problem-solving and written expression. Therefore, developmental timing of maltreatment plays a pivotal role in determining its severity. Cicchetti and Toth (2005) [39] emphasized that maltreatment experienced during later childhood or adolescence often results in worse outcomes compared to early-life trauma, as older children are more likely to internalize negative experiences and develop maladaptive coping mechanisms. This extended exposure can impair the ability to acquire higher-order academic skills, such as those required for dysgraphia and dyscalculia, as these tasks demand sustained attention, memory, and executive functioning. Furthermore, older children who experience maltreatment may face additional challenges in academic settings due to the social and emotional consequences of their trauma, such as difficulties in peer interactions and reduced self-efficacy. Thus, children with LD need early education about the risks of abuse and how to avoid it in a way that they can understand. Parents can get to know all persons working with their child and observe interactions closely for any signs of abuse. Parents and other caregivers like teachers may be the abusers, so other adults in the child's life should also be able to identify possible abuse and know how to report the abuse. Parents of children with LD and the organizations they are a part of (such as schools, colleges, and NGOs) can form relationships with victims, share each other's expertise together in serving children with LD in their local communities.

CONCLUSION
Present study intended to examine the predicting role of child abuse and its various domains in learning disabilities. Results

based on correlation analysis evince that with increasing the level of abuse with children, the magnitude of learning disability (LD) also increased. Moreover, regression results proved the positive contributing role of various domains of child abuse as well as age, in various types of learning disability. Overall learning disability was found positively predicted by educational neglect, physical abuse, sexual abuse, physical neglect, and emotional neglect. Whereas, educational neglect was found to be the strongest predictor of overall learning disability. These findings confirm the significant role of different types of Child abuse in escalating learning disabilities.

Thus, findings of this study are crucial in contributing to the knowledge base concerning child abuse, learning disability and its correlates. These insights highlight the importance of early identification and intervention to mitigate the long-term consequences of maltreatment, and to provide educational supports for affected students. Overall, results of this investigation might deliver a base for certain preventive actions to be carried out.

There are some limitations of the study. Firstly; to make generalization of findings, the study needs larger sample of students with LD and abuse. Secondly, researcher should use mixed research method to get more insight about the findings. Some other factors which may affect association of child abuse and LD should be explored.

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