

## Association Of Childhood Trauma, Impulsivity, Lower Resilience, Social Support On Daily Stress In Suicidal Attempters And Conceptualist

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### ABSTRACT

Suicide is a worldwide problem. Social support appears to be an essential element in predicting suicide risk and resilience, according to decades of studies. Among this study, researchers looked at the impact of childhood trauma, resilience, impulsivity, and social support on daily stress in suicide attempters and conceptualists. Longitudinal research was carried out on sixth grade children from eight different schools with 1040 data were collected, recruited and divided into three categories: who had tried suicide before, who had suicidal ideation, and those who were not. Impulsiveness, resilience, and social support have been examined after participants finished background questionnaires, such as the Childhood Trauma Questionnaire (CTQ). Multinomial Logistic regression was performed to determine the association among independent factors and suicidal attempters and conceptualist. The results indicated that the selected disorders are associated with suicide attempters and conceptualists. Furthermore, children with higher perceived stress that reported greater optimism and hope at beginning have been less likely to exhibit SI and SP, and the issue-solving and cognitively maturity matured feature of resilience had a substantial preventive role on SP continuously. Suicide risk was significantly elevated by perceived stress, which moderated the preventive role of resilience on suicides. Upcoming suicide intervention and prevention efforts must take into account both threat and preventive aspects of suicidal behaviour.

**Keywords:** Suicide, childhood trauma, resilience, impulsivity, social support, suicidal ideation, suicidal plan, suicidal attempt.

### 1. INTRODUCTION

Vulnerability to traumatic incidents is a typical childhood experience, with over 60% of children affected by 16 age, and > 30% were affected by several traumas [1]. Posttraumatic stress disorder as well as other frequent children behavioral and emotional issues is linked to traumatic situations [2]. Childhood trauma, especially mistreatment, has been linked to adult disability and psychopathology in a large body of research. These investigations, on the other hand, have mostly depended on adult accounts of incidents that happened decades ago. Based on the individual's present mental health, retroactive recollections are susceptible to simple loss or memory bias [3]. Mental diseases, traumatic occurrences in childhood, as well as physical health difficulties are all linked to the beginning of suicidal behavior later on. Despite the fact that sexual assault is linked to lifelong suicide attempts, research have found that it is merely "moderately associated" to eventual psychiatric illnesses [4]. Suicide tries and suicidal thoughts were serious public health issues, having global lifetime incidence rates of

2.7 and 9.2 percent, correspondingly [5]. Following decades of study, our capacity to detect and prevent such disorders remains limited. The field's concentration on determining risk variables while generally neglecting possible protective variables is one element leading to this challenge. Protective factors aren't merely the reversal or lack of risk variables; they're also factors linked to a lower chance of a negative result among individuals who are at risk of this one. Indeed, according to a comprehensive meta-analysis among all self-injurious actions and thoughts circulated over the past 50 years prospective cohort studies, just 12.6% of all research evaluated protective factors [6]. Recognizing resilience adequately seems to have the ability to enhance prevention and influence evidence-based therapies. Another issue that makes it hard to anticipate and stop suicide is that some research examines suicidal thoughts frequently over short time periods [7], [8]. 0.10 percent of impact estimates in the same planned trials of meta-analysis have obey durations of <1 month [6]. This is significant since suicidal thoughts can fluctuate dramatically from day to day [9], and investigations that evaluate suicidal thoughts at prolonged intervals might miss significant decreases or increases in suicidal thoughts, which can only be detected with some more regular evaluation.

The function of impulsivity, which was discovered as a possible threat factor for suicide behaviours over a century ago, has sparked a lot of curiosity. Since it is assumed that suicidal acts were conducted by reckless judgments with so little regard for the extreme negative repercussions, impulsiveness has been regarded to play an important part in suicide. As a result, those who have greater trait impulsivity and consider suicide have been regarded to be more likely to act on their suicidal intentions [10]. Two most recent meta-analyses identified substantial but minor links between impulsivity and suicidal conduct, whereas another found no link between impulsivity and suicidal mortality as assessed in psychological autopsy investigations [11]. Suicidal risk and resilience have long been thought to be influenced by social support. Individuals that are resilient may have better coping skills when confronted with unpleasant environmental factors [12]. The liable-resilience stress theory for psychological illnesses [12], on the other side, argued that preventive and risk elements were all on opposing sides of an individual's adaptation process when faced with stressful conditions. Although stress in higher levels can lead to vulnerability, strong degrees of resilience can help people adapt to difficult circumstances in a positive way that leads to better results. When confronted with parental abuse, for example, teenagers who are more resilient are less likely to self-harm. Furthermore, the resilience structure has various dimensions, and people can use various protective frameworks to cope with stressful circumstances, like positive self-esteem, good sentimental adjustment capacity, great social interaction abilities, independence, compassionate, optimistic and hopeful, better problem-solving capacity, and friends/family support [13], [14]. Connections that cause somebody to "think that he is tended for and loved, regarded, and mutual duties network's member" are classified as social support [15]. Researchers have speculated that social support might play a vital role in the suicide risk prediction since the beginning of time. The Interpersonal Theory of Suicide, which has been proposed more subsequently, claims that social support enhances sentiments of togetherness, therefore lowers suicide risk [16].

The Interpersonal Theory of Suicide, for example, considers social support to be flexible. Prominently, a theoretical work's long history on social assistance implies that it is a concept that swings across short time periods, and construct's the apparent nature is embedded in the context of social support. Nevertheless, few researches have looked at how perceived social assistance differ from day to day. Furthermore, social support has only been assessed as other variables predictor or moderator in the majority of those researches. Social assistance has been connected to a lower likelihood of suicidal thoughts and behavior in both adolescents and adults, according to several researches. Moreover, the association of different childhood problems on daily stress in suicidal attempters and conceptualist have not been developed yet. Thus, this research association of childhood trauma, impulsivity, lower resilience, social support on daily stress in suicide attempters and conceptualist have been studied.

## 2. RELATED WORK

Some of the recent literatures related to childhood trauma, impulsivity, lower resilience, social support in suicide attempters is described as follows:

Despite the fact that childhood trauma is indeed a substantial cause of suicide ideation, very little understood over how different types of childhood abuse influence thoughts of suicide or what variables attenuate the link between suicidal thoughts and childhood trauma. As a result, Yong-Chun Bahk et al. [17] looked at the relationship between suicide ideation and childhood trauma, as well as possible mediators. The findings showed

that sexual assault as a childhood is a substantial indicator of suicidal thoughts. The relationship among suicidal thoughts and maltreatment was moderated by reported social support. The connection among suicidal thoughts and both emotional and physical maltreatment has been totally mediated by anxiety. Suicide prevention interventions for childhood trauma survivors should concentrate on anxiety sensations and seek to build social support. Obsessive-Compulsive Disorder (OCD) and childhood trauma symptoms characteristics were linked to suicidal thinking in OCD patients were studied by Vahid Khosravani et al. [18]. The study comprised 70 OCD outpatients with such a history of suicide attempts as well as 60 healthy controls. Suicide thoughts were explained by a childhood trauma sexual abuse history and an OC symptoms component of undesirable ideas. Sexual assault and inappropriate thoughts were found to play a role in increased suicidality, which has crucial consequences for the suicide risk assessment and management in OCD patients who had attempted suicide several times. Rukiye AY and Lale Gonenir Erbay [19] conducted research to determine the link among suicide risk and childhood trauma in people with OCD. A total of 67 participants with OCD have been enrolled in the research. Childhood traumas are linked to obsessive tendencies, according to the findings of the study. Enhanced suicide risk was identified in the category with childhood trauma, irrespective of sadness and anxiety. Childhood trauma was incorporated to decreased cortisol responsiveness to an experimental stressor and residual cortisol levels in suicidality ideators and attempters, according to Daryl B. O'Connor et al. [20]. The findings showed that childhood trauma has been linked to decreased HPA axis function in sensitive individuals in adolescence. The problem of this study is to figure out the exact causal processes that link suicide risk, cortisol, and trauma as well as to see if the childhood trauma effects on cortisol rates can be changed through psychosocial treatment.

Suicide has been the second greatest cause of mortality in teenagers, and impulsivity was emerged as a potential risk indicator. Randy P. Auerbach et al. [21] investigated whether different dimensions of impulsivity have been connected with suicidal thinking, intentions, and tries in various ways. These impacts were substantial in female and not on male adolescents, according to exploratory gender assessments. These findings shed light on how various sorts of impulsivity enhance the likelihood of suicide ideas and tries in different ways. The consequences of early detection and protection of teen suicide were examined. Azim Hadzic et al. [22] investigated the trait impulsivity relationship and suicidal thoughts and behaviour in the sense of the Interpersonal Psychological Theory of Suicide (IPTS), as well as the trait impulsivity association with the suicidal ideation fluctuation in a unipolar depression inpatient sample. The findings revealed no links among suicidal thoughts and trait impulsivity, frustrated belongingness, or observed burdensomeness, with the exception of a small but substantial link among trait impulsivities and frustrated belongingness concentration subdomain. Suicidal conduct was found to be associated with trait impulsivity, but not by the trait impulsivity's various subdomains. Furthermore, the significance of suicidal thoughts variation in predicting suicide risk wasn't really examined. For over a century, impulsivity has indeed been recognized as a contributing reason in why some persons who contemplate suicide go to try suicide. Prior research, however, has been hampered by the lack of experimental groups that really can verify this idea and the treatment of impulsivity as a one-dimensional concept. To address these issues, Alexander J. Millner et al. [23] contrasted suicide intrigued and suicide attempters on many impulsiveness variables. According to the findings of the two researches, attempters may not even have considerably more trait impulsiveness than ideators, but they may have greater impulsiveness when it's in a depressive situation. In China, suicide among college students became a major public health concern. As a result, Yong-guang Wang et al. [24] performed a cross-sectional investigation to determine the variations between suicide ideators and suicide attempters. Even though female gender, suicides positive family history, raised overall impulsivity, positive psychiatric screening, and increased motor impulsivity have all been linked to suicidal thoughts, only suicides optimistic family history and increased motor impulsivity might distinguish suicide attempters from suicidal thoughts, according to the findings. Furthermore, no prospective or longitudinal studies have been done to verify these results.

YunLing Chen and PoHsiu Kuo [25] conducted a longitudinal research involving data from 1035 junior intermediate school students. The relationship among independent factors and suicidal behaviours was investigated using logistic regression. Students experiencing moderate perceived stress whom reported more optimism and hope have been less probable to have suicide ideation and intention at base, and the issue-solving and mental maturity matured dimensions of resilience had a substantial protective impact on suicidal intention longitudinally. Suicide risk was significantly elevated by perceived stress, which moderated the resilience on suicide protective effect. Prospective suicide intervention and prevention efforts must take into account both threat

and mitigating aspects of suicidal behaviour. Because few researchers have examined into the function of preventive variables in suicidal ideation, Jung-Ah Min et al. [26] performed a research on social support and resilience in mental patients with anxiety or depression disorders whom are already at threat of suicide. The potentially affecting factors interaction and independent effects have been determined using hierarchical multiple logistic regression analysis. The findings recommended that resilience may reduce the impact of anxiety and depression symptoms on suicide ideation in people who suffer from anxiety and/or depression disorders. For suicide protection, a resilience evaluation and program centred on resilience improvement is recommended. Somatic sensations, alexithymia, resilience, and their associations with suicide thought in drug-naïve adult outpatients experiencing from the first period severe depression are re-evaluated by Domenico De Berardis et al. [27]. When all demographic and medical factors were compared by gender, no substantial variations were found. Low resilience and alexithymia have been found to be enhanced suicide ideations significant predictors in a first severe depressive episode. However, the study's shortcomings must be taken into account. Matthew E. Hirschtritt et al. [28] investigated the link among suicidal ideation and peer victimisation, as well as the extent to which personal resilience mediate this link. For individuals who had been verbally victimised by a peer, the gradient between inner resilience and suicide ideation was substantially steeper. Peer victimization was observed to be linked to a higher incidence of suicidal ideation even when it occurred infrequently. Internal resilience has been linked to a lower risk of suicide thoughts, especially in cases of verbal peer victimisation. The findings indicated that attempts to reduce suicide thoughts among teenagers should focus on reducing peer victimisation as well as building internal resilience.

In an adolescents clinical sample, Adam Bryant Miller et al. [29] have investigated the relative impacts of parental, school perceptions, and close friend of social assistance on present suicidal thoughts and suicide attempt histories. Logistic regression has been employed to evaluate the social supports main and interaction effects on the suicidal attempt risk. The logistic regression analysis result demonstrated that, after controlling for close friend and school assistance, evaluations of poorer parental support significantly associated suicidal attempt histories. The findings fill a substantial break in the research on social assistance and suicide by revealing that opinions of parental and school assistance are more essential than peer-type support in explaining suicidal ideation and conduct. Suicidal thoughts, anxiety, and social assistance among professional firemen were investigated by Grace Stephanie J. Carpenter et al. [30]. Overall, 334 firemen participated in the study, which included assessments of professional stress, social support, and suicide ideation. The findings showed that there had been no link between professional stress and suicide ideation at significant rates of social assistance. Social support can help to reduce the link between professional stress and suicide ideation. Adults having autism spectrum disorder (ASD) have been more likely than the normal population to commit suicide. The factors driving this higher risk have yet to be discovered. In a study of 76 persons with ASD, Darren Hedley et al. [31] looked at perceived social assistance as a possible protective factor against depressive indicators and suicide thought. Although social assistance in the appraisal and connection form was not linked to ideation or depression, the real (material) support's perceived availability influenced ideation implicitly via depression. The results imply that tangible assistance, rather than assessment or connection, may operate as an intermediate preventive mechanism against suicidality in people with ASD. Suicidal thoughts are a typical symptom of depression, and that's linked to suicidal behaviour. Although social support has been linked to suicidal ideation in younger individuals with depression, it is uncertain how distinct social assistance characteristics affect suicidal ideation. Carl I Moller et al. [32] looked at the connection between social assistance aspects and suicidal thoughts in young persons with serious depression. Accounting for demography and depressive severity, hierarchical regression has been used to investigate correlations between social assistance and suicidal thoughts. Perceived Family Support has been found to be negatively linked with suicide ideation in young person's suffering from serious depression. The findings are only correlational; it is impossible to say whether boosting family support will reduce the severity of suicidal thoughts. The overview of reviewed literature is shown in table.1.

**Table 1:** Overview of reviewed literatures

| Referen<br>ce | Author                           | Yea<br>r | Article<br>title                                                                                                                                | Responde<br>nts | Survey<br>type                   | Investigat<br>ed<br>disorder | Analysis<br>used                            | Social<br>suppo<br>rt<br>includ<br>ed<br>(Yes/N<br>o) |
|---------------|----------------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------|------------------------------|---------------------------------------------|-------------------------------------------------------|
| [17]          | Yong-Chun Bahk et al.            | 2017     | Relationsh<br>ip between<br>suicidal<br>ideation<br>and<br>childhood<br>trauma:<br>Role of<br>potential<br>mediators<br>and<br>maltreatm<br>ent | 211             | Questionn<br>aire                | Childhood<br>trauma          | Path<br>analysis                            | Yes                                                   |
| [18]          | Vahid Khosravani et al.          | 2017     | Childhood<br>trauma<br>relation to<br>suicide<br>thought in<br>OCD                                                                              | 130             | Questionn<br>aire                | Childhood<br>trauma          | Multiple<br>linear<br>regressio<br>n        | No                                                    |
| [19]          | Rukiye AY and Lale Gonenir Erbay | 2018     | Associatio<br>n among<br>suicide<br>probability<br>and<br>childhood<br>trauma in<br>OCD                                                         | 67              | Questionn<br>aire                | Childhood<br>trauma          | Partial<br>correlatio<br>n                  | No                                                    |
| [20]          | Daryl B. O'Connor et al.         | 2018     | Childhood<br>trauma<br>effects on<br>cortisol<br>levels in<br>suicidal<br>ideators<br>and<br>attempters                                         | 160             | Questionn<br>aire                | Childhood<br>trauma          | Hierarchi<br>cal linear<br>regressio<br>n   | No                                                    |
| [21]          | Randy P. Auerbach et al.         | 2017     | Suicidality<br>and<br>impulsivit<br>y in<br>adolescent<br>inpatients                                                                            | 381             | Self-report<br>questionna<br>ire | Impulsivit<br>y              | Explorato<br>ry Factor<br>Analysis<br>(EFA) | No                                                    |
| [22]          | Azim Hadzic et al.               | 2020     | Associatio<br>n of                                                                                                                              | 84              | Questionn<br>aire                | Impulsivit<br>y              | Correlati<br>on                             | No                                                    |

|      |                             |      |                                                                                                                                           |      |                           |               |                                           |     |
|------|-----------------------------|------|-------------------------------------------------------------------------------------------------------------------------------------------|------|---------------------------|---------------|-------------------------------------------|-----|
|      |                             |      | suicidal thoughts and trait impulsivity and its fluctuation in Interpersonal Theory of Suicide context                                    |      |                           |               |                                           |     |
| [23] | Alexander J. Millner et al. | 2020 | Are suicidal attempters are more aggressive than suicidal ideators                                                                        | 346  | Self-report questionnaire | Impulsiveness | Meta-analysis                             | No  |
| [24] | Yong-guang Wang et al.      | 2017 | Suicides family background and increased motor impulsivity difference suicide triers from suicide thoughts among chinese college students | 1008 | N/A                       | Impulsivity   | Logistic regression                       | No  |
| [25] | YunLing Chen and PoHsiu Kuo | 2020 | Resilience and perceived stress effects on suicidal thoughts in young adolescents                                                         | 1035 | Composite questionnaire   | Resilience    | Logistic regression                       | No  |
| [26] | Jung-Ah Min et al.          | 2015 | Resilience moderates the anxiety symptoms and depression                                                                                  | 436  | Self-report questionnaire | Resilience    | Hierarchical multiple logistic regression | Yes |

|      |                                     |      |                                                                                                     |        |                           |                                                 |                                     |     |
|------|-------------------------------------|------|-----------------------------------------------------------------------------------------------------|--------|---------------------------|-------------------------------------------------|-------------------------------------|-----|
|      |                                     |      | risk on suicide ideation in anxiety and/or depression disorders patients                            |        |                           |                                                 |                                     |     |
| [27] | Domenico De Berardis et al.         | 2020 | Somatic sensations, resilience, alexithymia and their link with suicide ideation: exploratory study | 103    | Questionnaire             | Resilience, alexithymia, and somatic sensations | Linear regression                   | Yes |
| [28] | Matthew E. Hirschtritt et al.       | 2015 | Peer victimization, suicidal ideation, and internal resilience among adolescents                    | 42,594 | Self-report survey        | Resilience                                      | Binary logistic regression          | Yes |
| [29] | Adam Bryant Miller et al.           | 2015 | Social support role in adolescent suicide attempts and ideation                                     | 143    | Clinical interview        | -                                               | Linear and logistic regression      | Yes |
| [30] | Grace Stephanie J. Carpenter et al. | 2015 | Stress, suicidal ideation, and social support in professional firefighters                          | 334    | Self-report questionnaire | -                                               | Logistic regression                 | Yes |
| [31] | Darren Hedley et al.                | 2017 | Depression, suicidal ideation, social support in adults with ASD                                    | 76     | Online questionnaire      | Autism spectrum                                 | Structural Equation Modelling (SEM) | Yes |

|      |                      |      |                                                                                                                                      |     |               |                  |                         |     |
|------|----------------------|------|--------------------------------------------------------------------------------------------------------------------------------------|-----|---------------|------------------|-------------------------|-----|
| [32] | Carl I Moller et al. | 2021 | Relationships between suicidal ideation and social supports different dimensions in young people having disorder as major depression | 283 | Questionnaire | Major Depressive | Hierarchical regression | Yes |
|------|----------------------|------|--------------------------------------------------------------------------------------------------------------------------------------|-----|---------------|------------------|-------------------------|-----|

### 3. METHOD

#### 3.1. Participants

Students in sixth grade from eight different schools have been asked to fill out surveys about this subject, and more information is provided below. At the outset, there have been 1040 children with a mean age of 13.6 years (Standard Deviation (SD) =0.4 years), 450 males (43.5%), 575 girls (55.6%), as well as 15 (1.5%) children without gender statistics. The participant's demographic characteristics have been represented in table.2.

**Table 2:** Demographic characteristics distribution for suicide attempters at n = 1040

| Variable                    | Total (n = 1040) | Suicide thought |              | Suicide plan |              | Suicide attempt |               |
|-----------------------------|------------------|-----------------|--------------|--------------|--------------|-----------------|---------------|
|                             |                  | Yes (n = 220)   | No (n = 820) | Yes (n = 60) | No (n = 980) | Yes (n = 52)    | No ( n = 988) |
| Respondent characteristics  |                  |                 |              |              |              |                 |               |
| Age (years), M ±SD          | 13.6 ±0.4        |                 |              |              |              |                 |               |
| Gender, n (%)               |                  |                 |              |              |              |                 |               |
| Male                        | 450 (43.5)       | 76 (34.5)*      | 374 (45.6)   | 20 (32.6)    | 447 (45.6)   | 19 (36.8)       | 476 (48.2)    |
| Female                      | 575 (55.6)       | 137 (62.4)      | 411 (50.1)   | 29(49.2)     | 456 (46.5)   | 27 (52.4)       | 488 (49.4)    |
| Without gender statistics   | 15 (1.5)         | 7 (3.1)         | 35 (4.3)     | 11 (18.2)    | 77 (7.9)     | 6 (10.8)        | 24 (2.4)      |
| Total                       | 1040             | 220             | 820          | 60           | 980          | 52              | 988           |
| Sixth grade students, n (%) |                  |                 |              |              |              |                 |               |
| School1                     | 148 (14.2)       | 27 (12.2)       | 113 (13.8)   | 10 (17.2)    | 122 (12.5)   | 7 (14.4)        | 218 (22.1)    |
| School2                     | 175 (16.8)       | 29 (13.1)       | 143 (17.4)   | 13 (21.8)    | 145 (14.8)   | 9 (16.8)        | 114 (11.5)    |
| School3                     | 222 (21.3)       | 32 (14.8)       | 102 (12.5)   | 8 (12.9)     | 169 (17.3)   | 5 (10.2)        | 166 (16.8)    |
| School4                     | 130 (12.5)       | 34 (15.3)       | 79 (9.6)     | 7 (11.4)     | 191 (19.5)   | 7 (12.8)        | 134 (13.6)    |
| School5                     | 75 (7.2)         | 19 (8.6)        | 128 (15.6)   | 5 (9.2)      | 144 (14.7)   | 8 (15.7)        | 145 (14.7)    |
| School6                     | 176 (16.9)       | 14 (6.4)        | 174 (21.2)   | 6 (10.4)     | 94 (9.6)     | 11 (20.6)       | 150 (15.2)    |



|                                          |             |             |            |             |            |             |            |
|------------------------------------------|-------------|-------------|------------|-------------|------------|-------------|------------|
| School7                                  | 58 (5.6)    | 40 (18.2)   | 44 (5.4)   | 6 (10.8)    | 53 (5.4)   | 3 (5.3)     | 37 (3.8)   |
| School8                                  | 57 (5.5)    | 25 (11.4)   | 37 (4.5)   | 4 (6.3)     | 61 (6.2)   | 2 (4.2)     | 23 (2.3)   |
| <b>Total</b>                             | <b>1040</b> | <b>220</b>  | <b>820</b> | <b>60</b>   | <b>980</b> | <b>52</b>   | <b>988</b> |
| <i>Disorders</i>                         |             |             |            |             |            |             |            |
| Childhood trauma n (%)                   | 254 (32.6)  | 80 (36.5)   | 375 (45.8) | 22 (37.3)   | 434 (44.3) | 36 (69.4)   | 548 (55.5) |
| Lower resilience (M±SD)                  | 85.2±12.3   | 78.5±15.2** | 83.2±12.9  | 76.9±13.6** | 82.7±10.4  | 76.8±14.2** | 87.5±15.2  |
| Impulsivity n (%)                        | 128 (42.5)  | 660 (63.5)  | 444 (54.2) | 38 (62.7)   | 546 (55.7) | 16 (30.6)   | 440 (44.5) |
| <b>Total</b>                             | <b>1040</b> | <b>220</b>  | <b>820</b> | <b>60</b>   | <b>980</b> | <b>52</b>   | <b>988</b> |
| <i>Support (M±SD)</i>                    |             |             |            |             |            |             |            |
| Social support (Cronbach's alpha = 0.91) | 43.7±12.6   | 32.8±12.6   | 45.3±11.4  | 38.6±10.9   | 40.5±14.9  | 34.1±11.2   | 44.9±10.2  |

Note: \*p<0.05; \*\*p<0.01

### 3.2. Procedure

The current investigation is component of a larger cohort study that aims to track children's psychological health and risk behaviours. In summary, 25 primary schools and 19 junior high schools have been chosen at arbitrary for analysis. Participants have been asked to complete a portion of a composite's questionnaire depending on their grades, which included questions about demographic data, eating habits, personality, several markers of psychological health and behavioural disorders, sleep quality, and family dynamics, among other things. Data from school children and subsequent 1-year follow-up information are gathered for the present research to explore the relationships among childhood trauma, impulsivity, reduced resilience, and social support among suicidal attempters and conceptualist. All children and their parents gave their complete approval. The conceptual framework of this study is shown in Fig.1.

### 3.3. Measures

#### 3.3.1. Childhood Trauma Questionnaire (CTQ)

A 28-item based self-report evaluation has been employed to screen for childhood or adolescent maltreatment or neglect history. The CTQ comprises five subscales that correspond to different kinds of assault: physical, emotional, and sexual assault, as well as physical and emotional negligence, each one with 5 components (1 = never true, 5 = quite often true). A three-item reduction scale was included for identifying false-negative trauma claims. Every subscale includes a cut-off value that indicates the childhood trauma intensity: low to moderate, none or minimal, medium to unadorned, and unadorned to extreme. We constructed an overall childhood trauma score since we're concerned in exposure to childhood trauma's every sort in this research. Participants who scored in the severe or moderate range on every subscale got 1 score to reflect involvement to that trauma type. Physical abuse > 9, emotional neglect > 14, sexual abuse > 7, Emotional abuse > 12, and physical neglect > 9 have been the cut-off values for every subscale for extreme or moderate. Thus, CTQ values ranges from zero to 5 on the scale. With over 2000 respondents data, covering both non-clinical and clinical categories, test-retest and internal reliabilities, as well as construct and content validities, were demonstrated [33]. Cronbach's alpha value ranged from 0.72 to 0.93 in the present study.

#### 3.3.2. Impulsiveness

The following impulsivity's ten domains were evaluated employing a 90-item self-report tool: (1) negative generalisation (4 items; Cronbach's alpha = 0.84), (2) immediacy (12 items; Cronbach's alpha = 0.94), (3) lack of persistence (9 items; Cronbach's alpha = 0.81), (4) absence of self-control (14 items; Cronbach's alpha = 0.87), (5) laziness (19 items; Cronbach's alpha = 0.95), (6) sadness symptom (2 items; Cronbach's alpha = 0.83), (7) incapability to conquer lethargy (7 items; Cronbach's alpha = 0.95), The 10 impulsivity categories in our cohort were all strongly inter-correlated (all  $p < 0.003$ ). The subscales were discovered to be related to a

psychopathology wide spectrum, particularly impulsivity and suicidality, after being verified against early adversity and genetic risk measures. Higher scores showed greater impulsivity, with responses ranging from 1 (I concur a lot/never) to 5 (I dispute a lot/very frequently).

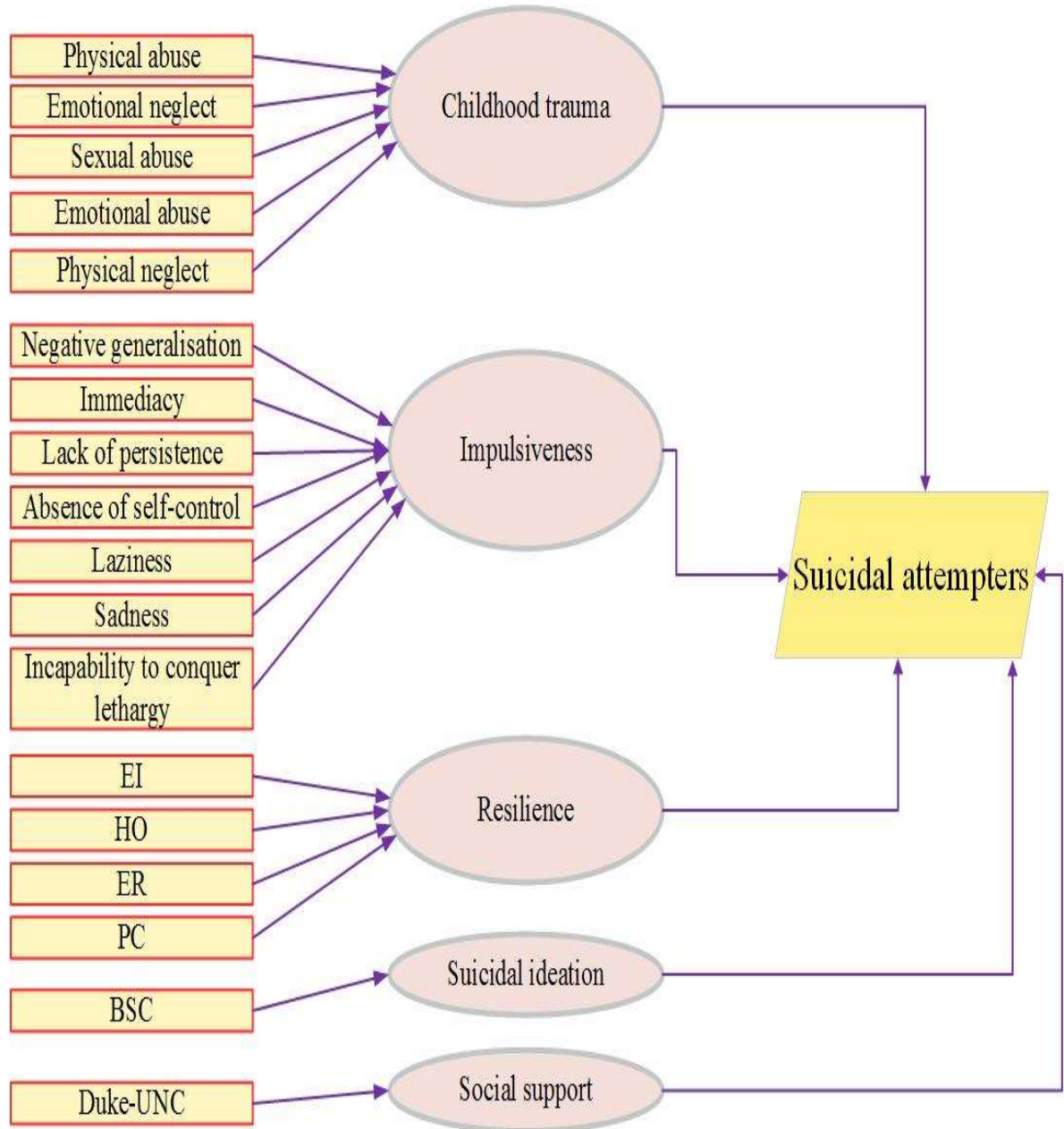


Figure 1: Conceptual framework

### 3.3.3. Resilience

The Inventory of Adolescent Resilience (IAR), designed by Chan et al. [34], was employed to test resilience different dimensions for junior high-school children. The IAR used a 4-item Likert scale from 1 to 4 (i.e., strongly disagree to strongly agree) to measure resilience four characteristics: empathy as well as interpersonal interaction (EI), emotional regulation (ER), hope and optimism (HO), problem-solving and cognitive maturity (PC). We computed aggregate scores for every dimension as well as an overall IAR score, the higher values indicating greater resilience. Internal reliability (Cronbach's alpha > 0.9), criterion and construct validity were all validated by the IAR.

### 3.3.4. Suicidal ideation

Depending upon the Beck Suicide Scale (BSC) [35], we employed 3 items to evaluate everyday suicidal ideation (SI). On a 3-point measure (medium to strong, weak, none) comparable to those employed in the BSC, participants have been prompted to score their desire to live, die, and death by suicide. For instance, participants may choose one of 3 responses to evaluate their desire to die: (0) "I still had no desire to die," (1) "I have such a low desire to die," or (2) "I have quite a moderate to strong desire to die." Respondents' desire to live scores have been reverse-scored, and the 3 items were then added together to get scores ranging from Zero to 6. Higher test scores indicated higher degrees of suicidal thoughts, according to the scoring system. The Cronbach's alpha ranges from 0.74 to 0.97 in the present research.

### 3.3.5. Social support

The Duke-UNC-11 Functional Social Support Questionnaire [36], an 11-item questionnaire, which generates ratings for perceived qualitative and functional social assistance, has been used to assess social support. The total scale was employed in this study, and it has demonstrated acceptable reliability and validity amongst Spanish participants [37]. The total score values from 11 to 55, having higher ratings suggesting more social support. Internal reliability has been excellent in this study (Cronbach's alpha = 0.91).

### 3.3.6. Covariates

We looked for the prevalence of numerous a priori confounders that were added to see if the connection between social assistance and suicidal thoughts remained after controlling for recognised risk variables for thought. We measured burdensomeness, sadness, and frustrated belongingness by having respondent's rates how much they experienced each component on a scale of 0 (not at all) to 4 (very). To aid respondents' construct understanding, frustrated belongingness has assessed using the term "lonely." Cronbach's alpha ranges from 0.68 to 0.82 in the present research.

### 3.4. Data analysis

To begin, descriptive statistics have been produced for all research variables (i.e., standard deviations and mean for continuous variables, and percent for qualitative variables) both overall and for every of the suicidality risk categories. Furthermore, with suicidality risk categories as the outcome variables (the sample group included suicidal ideation, suicidal plan, and suicide attempt groups), and demographic, social support, impulsivity, and lower resilience factors as independent factors, a multinomial logistic regression framework was generated. The model ( $1.10 \leq VIF \leq 1.43$ ) showed no signs of multicollinearity when variance inflation components were examined. Lastly, we looked at interaction impacts between any disorders and protective component variables when controlling for age and gender to see if the association between childhood trauma, lower resilience, impulsivity, and every suicide risk category outcome has been attenuated by protecting factors. To examine demographic characteristics in distinct suicidal behaviours, Chi-square tests have been utilised. In suicide attempters and conceptualists, the Mann-Whitney U analysis has been employed to check scores of associations between childhood trauma, impulsivity, resilience, and social support on everyday stress. SPSS 26 and Stata 15 have been used for all analyses.

## 4. RESULTS

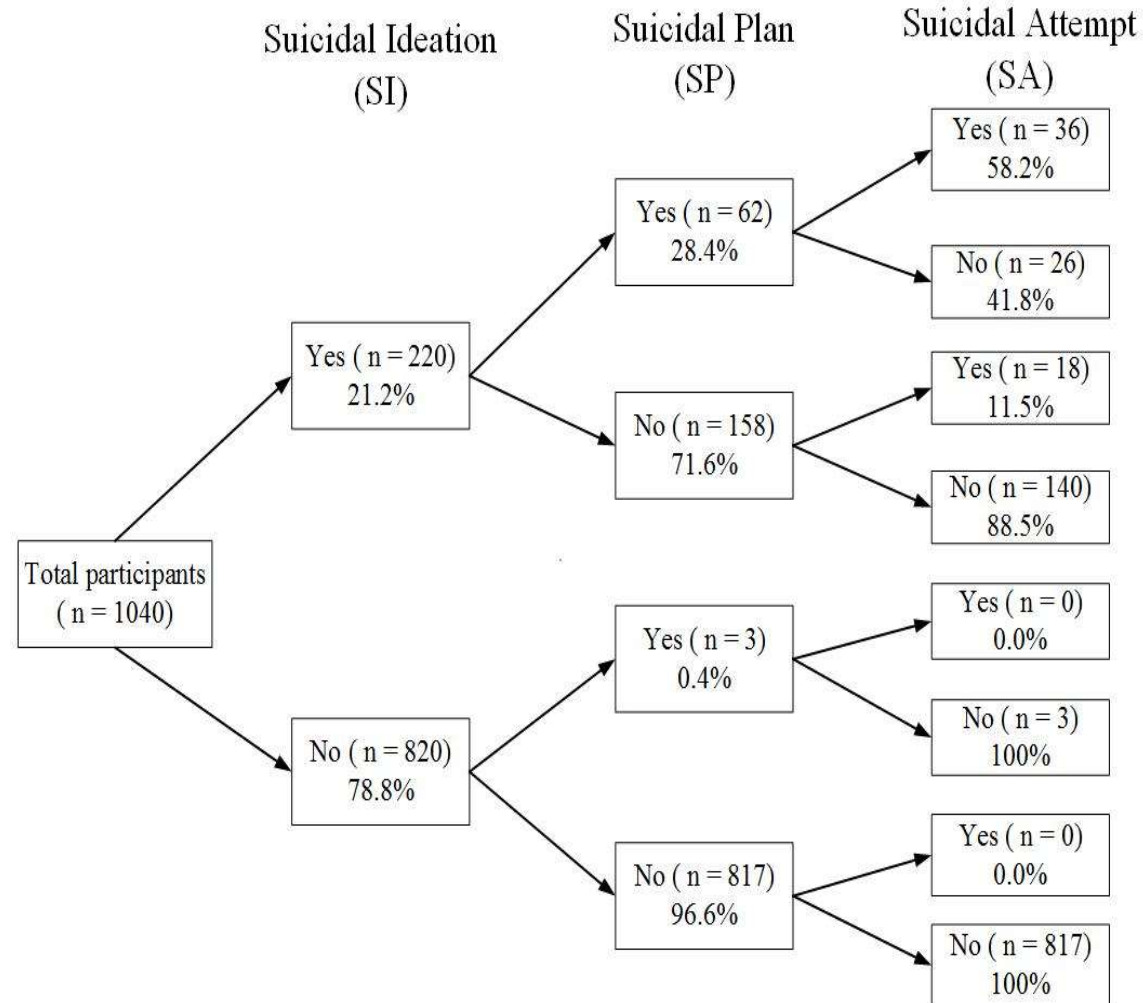
### 4.1. Suicidality prevalence

Table.1 indicates the basic characteristics of school children by distinct suicidal behaviours at  $n = 1040$ . Higher prevalence of Suicidal Ideation (SI) has been observed as  $n = 220$ , 21.2%, followed by Suicidal Plan (SP) as  $n = 60$ , 5.9%, and Suicidal Attempters (SA) as  $n = 52$ ; 4.9%. Female children seemed more prone to engage in suicide conduct. Gender and schools have been treated as factors in the variables in the subsequent regression analyses. Distinct scores in childhood trauma, impulsivity, and resilience have been indicated for varying suicide behaviours ( $p < 0.01$ ). The several suicidal behaviours distribution among school children at  $n = 1040$  is shown in Fig.2.

### 4.2 Factors associated with suicidal attempt

The correlation analyses results indicated that resilience, impulsivity, and childhood trauma were positively and significantly correlated with suicidal attempt. In comparison, the total and every dimensions of resilience have been negatively and significantly connected with suicidal attempt. In multinomial logistic regression analysis, children's resilience dimensions, and other disorders have been effective predictors of SP, SA, and SI. Even after controlling for the impacts of burdensomeness, sadness, and frustrated belonging, social

assistance has been linked to same- and next-day suicidal thoughts. Once the influence of same-day suicidal thinking was taken into account, however, social support has been found to be unrelated to next-day SI. This was also true for all the covariates. That is, after controlling for same-day SI, sadness, difficulty or delay, and a sense of betrayal were unrelated to next-day suicide thought. The association between childhood trauma, impulsivity, lower resilience, social support on daily stress in suicide attempters and conceptualist is shown in table.3.



**Figure 2:** Suicidal behaviours distribution among school children at n = 1040

**Table 3:** Multinomial logistic regression analysis results

| Block no,<br>variable            | Results of each step in 2-4 block |       |                  |       |                  | Results from last step |                  |       |
|----------------------------------|-----------------------------------|-------|------------------|-------|------------------|------------------------|------------------|-------|
|                                  | OR<br>(95%CI)                     | P     | OR<br>(95%CI)    | P     | OR<br>(95%CI)    | P                      | OR<br>(95%CI)    | P     |
| <i>1. Covariates</i>             |                                   |       |                  |       |                  |                        |                  |       |
| Age, y                           | 0.96<br>(0.94-1.0)                | 0.110 | 0.96 (0.93-1.0)  | 0.092 | 0.98(0.95-1.04)  | 0.524                  | 0.98 (0.92-1.04) | 0.142 |
| Gender                           | 0.90<br>(0.81-1.02)               | 0.075 | 0.92 (0.80-1.02) | 0.074 | 0.92 (0.80-1.02) | 0.074                  | 0.92 (0.81-1.05) | 0.175 |
| <i>2. Childhood maltreatment</i> |                                   |       |                  |       |                  |                        |                  |       |
| Sexual abuse, yes                |                                   |       | 2.04 (1.03-3.54) | 0.005 | 2.45 (1.14-4.75) | 0.024                  | 2.24 (0.89-6.72) | 0.076 |
| Emotional                        |                                   |       | 1.86 (1.05-      | 0.042 | 1.52 (0.75-      | 0.376                  | 1.54 (0.76-      | 0.387 |

|                            |                            |  |                            |  |                            |        |                            |        |
|----------------------------|----------------------------|--|----------------------------|--|----------------------------|--------|----------------------------|--------|
| neglect, yes               |                            |  | 3.2)                       |  | 2.54)                      |        | 2.98)                      |        |
| <b>3. Positive factors</b> |                            |  |                            |  |                            |        |                            |        |
| Low resilience             |                            |  |                            |  | 4.08 (2.06-7.84)           | <0.001 | 1.66 (0.65-3.76)           | 0.275  |
| Impulsivity                |                            |  |                            |  | 3.42 (2.89-5.06)           |        | 1.24 (0.64-3.52)           | 0.012  |
| <b>4. Support</b>          |                            |  |                            |  |                            |        |                            |        |
| Social support             |                            |  |                            |  |                            |        | 9.42 (3.87-22.56)          | <0.001 |
| Chi-square test            | $\chi^2 = 7.54, P = 0.482$ |  | $\chi^2 = 6.82, P = 0.565$ |  | $\chi^2 = 4.75, P = 0.852$ |        | $\chi^2 = 9.98, P = 0.282$ |        |

Note: OR- Odds Ratio; CI- Confidence Interval

Younger age, sexual abuse, physical abuse, emotional abuse, and emotional neglect have all been linked to moderate-severe suicidal ideation in multinomial logistic regression studies. In participants, the incidence of moderate to severe suicidal thoughts has been much reduced. After adjusting for demographic and medical factors, the model was expanded to incorporate a background of sexual abuse and emotional neglect, low resilience, and significant anxiety or depression. After accounting for important covariates, the interactions impacts of resilience with risk variables incorporated in ultimate analysis (emotional neglect and sexual abuse) have been studied in the multinomial logistic regression models.

## 5. DISCUSSION

After correcting for clinical and demographic characteristics, as well as childhood maltreatment, lower resilience as well as apparent social assistance has been a not substantial independent indicator of enhanced suicide ideation in this sample of outpatients with stress disorders. After controlling for relevant factors, resilience, on the other hand, mitigated the impact of anxious and depressive symptoms on suicidal thinking. A greater standard of resilience has been found to be protective against moderate-to-severe suicidal thinking in children with anxiety or depression. These results support the suicide resiliency indicators, which works as a protective shield against risk variables.

The current investigation yielded three major conclusions. First, those at risk of suicide, particularly those who had already attempted suicide, have been shown to have significant values of childhood trauma. Secondly, when optimizing for age, gender, and medication use, childhood trauma in higher levels have been linked to lower rested cortisol and attenuated cortisol responsiveness to stress in adolescence. Third, childhood trauma did not deal with family background of suicides to indicate more variation in (low) cortisol levels during rest or in reaction to stress. The category that had tried suicide had the childhood trauma in higher rates. In the attempted suicide category, 78.7% of those who attempted suicide said they had experienced at least 1 sort of serious or extreme childhood trauma, relative to 17.8% and 37.7% in the control and ideator groups, correspondingly. Suicide attempters have significant rates of childhood trauma, that is reliable with existing research [38], [39]. In a longitudinal cohort study of people who use drugs, Marshall et al. [39] revealed that equally elevated levels of severe and moderate childhood trauma were connected with suicide attempts using the CTQ. They discovered that serious sexual, physical, and psychological maltreatment as a kid was incorporated with a much higher chance of repeating suicide in adolescence.

In the current study, we discovered that greater than 1/4<sup>th</sup> of children with SI experienced SP, and 1/6<sup>th</sup> of ideators committed suicide, emphasising the need for extra care to protect children from having suicidal ideas and to recognize children who are more possible to occupy in self-harm actions. A moderate link among perceived stress and resilience could explain the declining relationship of resilience towards suicidal conduct when both components are considered concurrently in a regression analysis. We also found that the impact intensities of risk variables for suicidal conduct are larger than those of protective factors. Irrational thought correction and reinstallation of optimism are essential treatment tactics in cognitive therapy and cognitive behaviour therapy (CBT), which see sadness or suicide as a manifestation of individuals' feeling of despair and defective habitual thought. As a result, implementing strategies to improve and promote resilience might be a vital strategy to lower the risk of suicide behaviour among teenagers with higher levels of perceived stress.

Furthermore, this research adds to our understanding of the everyday variation of social assistance as

well as the everyday (real-time) relationship among social assistance and SI. We discovered significant intra-person everyday variation in social assistance that had a considerable negative correlation with same- and next-day SI and not with another-day SI after correcting for same-day SI. As a result, social support appears to guard against SI but not to significantly to constant fluctuations in it. These findings show that social assistance ought not to be thought of as a static entity that can be measured in a single test. Participants showed great heterogeneity in observed social assistance over a brief span of time, and on a successively finer 5-point scale. These swings in experienced social assistance might not have been observed if social support was assessed weekly or monthly. The social assistance variation we discovered could help in understanding and forecast suicidal ideation. While no further studies on everyday changes in social assistance and suicidal thoughts have been conducted, similar findings suggest that knowing oscillations in psychological situations can be particularly useful for forecasting mental health in various aspects. Even after controlling for disorders and demographic characteristics, we discovered a substantial link among greater rates of social assistance and decreased rates of suicidality. Interpersonal social assistance has been found to be more defending against suicidal behavior than intra-personal resilience in the current investigation.

## 6. CONCLUSION AND FUTURE WORK

Our findings show that apparent tension is a substantial risk variable for SI, SA, and SP in both longitudinal and cross-sectional data, while resilience has been a protective measure against SP and SI in children with greater perceived stress. Furthermore, this study revealed that persons predisposed to suicide, particularly those participants had already attempted suicide, had extremely significant levels of childhood trauma. In susceptible groups, greater levels of childhood trauma have been linked to reduced hypothalamic-pituitary-adrenal (HPA) system function, which was irrespective of a family background of suicide. Our findings show that assessing social assistance at a particular time period may not capture how often social assistance shifts over period amongst suicide attempters. More exact social assistance assessment has the opportunity to enable for further accurate resilience forecasting and effective support interventions. Furthermore, resilience may reduce the impact of sadness and anxious symptoms on SI in those who have depressive or anxiety illnesses and are at high risk of suicide. Based on these results, a resilience evaluation and strategic treatments to improve resilience may be beneficial for suicide prevention in this demographic. The issue for investigators is to figure out the exact causal processes that link cortisol, trauma, and suicide risk, as well as to see if the impacts of childhood trauma on stress levels can be changed through psychosocial treatment. In the future, successful suicide intervention and prevention initiatives will need to take into account both threat and preventive aspects of suicidal behaviour.

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