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Pre-suicidal Attitudes in the Youth: A Narrative Review of Psychological Theories and Prevention Implications

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Abstract:
Understanding pre-suicidal attitudes among youths requires critical inquiry through the lens of psychological theories that can inform early psychological assessment and preventive interventions. This study adopted a narrative review approach to examine the existing theories on pre-suicidal attitudes among youths and to develop an integrative psychological model for prevention. Four psychological theories of suicide that address suicidal attitudes were carefully selected: the Cognitive Model of Suicidal Acts, the Interpersonal Theory of Suicide, the Integrated Motivational–Volitional Model, and the Three-Step Theory of Suicide. The analysis revealed four interrelated components of pre-suicidal attitudes: cognitive (dysfunctional beliefs and cognitive rigidity), affective (psychache and hopelessness), behavioural (social withdrawal and passive self-damaging behaviours), and existential (loss of meaning and nihilistic orientations). The findings further suggested that factors such as the digital environment and the developmental stage may moderate and predispose adolescents and youths to pre-suicidal attitudes, while also accelerating their progression toward suicidal behaviour. Integrating these theories may facilitate the identification of individuals at the pre-ideational stage and provide opportunities for proactive prevention and early intervention in youths' mental health.

Keywords: Adolescent mental health, Pre-suicidal cognition, Suicidal attitudes, Suicide prevention, Suicide theory, Youth suicide.

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1. INTRODUCTION

Over the past two decades, suicidal behaviour among young people has become a major global public, social, economic, and mental health concern. It has been widely recognised as one of the leading causes of unnatural death among young people worldwide [1]. More concerning is the alarming rise in young people's involvement in non-fatal suicidal behaviours, including self-injury, superficial skin cutting, self-burning without the intent to die, and feelings of entrapment [2], which are often perceived as coping mechanisms for emotional distress. Although not everyone who experiences suicidal thoughts or ideation attempts or completes suicide [3], the impact of such

behaviours extends beyond immediate family members to the wider society. For families, pre-suicidal behaviour can create an atmosphere of fear and hypervigilance, as well as feelings of guilt, self-blame, social isolation, and disruption of family functioning [4]. On the other hand, society may experience increased healthcare burdens, loss of future productivity and human potential, as well as social contagion and the normalisation of suicidal behaviours, among other consequences [4]. Furthermore, several hidden forms of psychological vulnerability often go unrecognised during the early stage of suicidal risk behaviour. These vulnerabilities may contribute to the alarming number of young people who die by suicide [5].

One way to gain insight into youths' suicidal attitudes and their prevention is to better understand the theoretical perspectives underlying the motivations for suicidal behaviour at an early stage, commonly referred to as pre-suicidal attitudes. Although the term is rarely used in the literature, pre-suicidal attitudes encompass both non-suicidal self-injury-that is, deliberate self-harm without the intention to die-and other forms of self-injury, defined as the direct and intentional destruction of body tissue without lethal intent [6, 7].

While a plethora of studies have examined the factors contributing to suicidal ideation, thoughts, attempts, and deaths-including depression, helplessness, hopelessness, anxiety, impulsivity, previous suicide attempts, severe health conditions, substance abuse, and stressful life events, among others [8-10] other studies have focused on evidence-based interventions aimed at reducing suicidal thoughts and behaviours. These include means restriction, physician education, school-based programmes, Dialectical Behaviour Therapy (DBT), Cognitive Therapy for Suicide Prevention (CT-SP), and the Collaborative Assessment and Management of Suicidality (CAMS) [7]. Despite these efforts, relatively few studies have provided theoretical explanations for pre-suicidal attitudes, which are essential for a deeper understanding of the underlying motivations for suicide among youths and for informing prevention strategies. In light of the foregoing, this current study aims to advance the research on the existing leading theories of pre-suicidal attitudes among youths and to develop an integrative psychological model for their prevention through narrative synthesis.

1.1. Past Literature on Pre-suicide

Past studies have indicated that suicidal behaviour is a progressive process that often begins with tendencies and ideation and may advance to intent, attempts, and death by suicide [9, 11, 12]. While this entire process is referred to as suicidal behaviour, it is distressing at every stage, regardless of whether it results in death or survival [13]. Evidence further shows that pre-suicidal attitudes involve feelings of wretchedness, desolation, and misery, which perpetuate ruminative and brooding processes and induce significant distress, thereby negatively impacting quality of life [14-16].

Pre-suicide represents the less visible stage of the suicidal behaviour process and has been identified as an important indicator that has often escaped the attention of researchers [17]. However, several empirical studies have identified factors associated with maladaptive behaviours that may lead to suicide. These include alcohol use, misuse of prescribed and illicit drugs, and interpersonal violence [12, 18-20]. Another study found that perceived burdensomeness is a strong predictor of depression, loneliness, isolation, and suicidal ideation, which in turn are strongly associated with suicidal behaviour [21, 22]. Unwanted loneliness or social isolation at both individual and societal levels has also been reported as a major risk factor for suicide among adolescents and young adults in Spain, largely due to increased emotional suffering [23, 24].

Some studies have highlighted depression, alongside interpersonal factors, such as thwarted belongingness, perceived burdensomeness, fearlessness about death, and acquired capability for suicide, as significant predictors of pre-suicidal attitudes [2, 9, 25]. Likewise, alcoholism and helplessness have been found to predict suicidal tendencies significantly, whereas factors such as hopelessness, self-worry, self-doubt, and inefficacy were weaker contributors [9]. In Kazakhstan, an experimental study identified experiences of bullying, exposure to traumatic events, and low social support as key factors influencing pre-suicidal attitudes [26]. Other contributing factors include chronic or physical pain, post-traumatic stress, psychological distress, poor social adjustment, barriers to seeking professional help, impulsivity, aggression, lack of adaptive coping strategies, social problems, family conflict, lack of meaning in life, psychiatric disorders, sleep problems, and somatic conditions [2, 6, 12, 26-29].

In the same vein, research has proposed numerous theoretical explanations of the suicidal behaviour process, ranging from biological and cognitive-behavioural perspectives to suicidological and broader psychological theories, as well as causal models that describe the progression of suicidal behaviour. Some of the most prominent theories are reviewed in this section. Historically, Émile Durkheim's theory focused on the sociocultural dimensions of suicidal behaviour, conceptualising it as a social act. He classified suicide into four types-altruistic, anomic, egoistic, and fatalistic-based on levels of social integration and regulation. However, this framework primarily emphasises sociocultural factors and gives limited attention to the psychological, biological, and economic dimensions of pre-suicidal attitudes [30-33]. From a psychological perspective, Sigmund Freud proposed three interrelated and largely unconscious drivers of suicidal behaviour: depression or hopelessness (a wish to die), revenge or hate (a wish to kill), and guilt (a wish to be killed). These have been summarised as the thoughts, desires, and actions underlying suicidal tendencies [12, 34, 35].

Other psychological theories include the Interpersonal Theory of Suicide proposed by Thomas Joiner, which explains suicide as a progressive process beginning with suicidal ideation and potentially advancing to attempts and death. The theory emphasises that suicidal behaviour

develops from perceptions of low self-worth and progresses through perceived burdensomeness and thwarted belongingness to the desire for suicide. A key strength of the Interpersonal Theory lies in its ability to capture the progressive nature of suicidal behaviour [9, 36, 37]. Edwin Shneidman also proposed the Psychache Theory of Suicide, which conceptualises emotional or psychological pain as the primary motivation for suicidal behaviour. The theory acknowledges the progressive nature of suicide, suggesting that individuals may engage in suicidal behaviour when their ability to tolerate psychological pain is exceeded [7, 38, 39]. Roy Baumeister's Escape Theory similarly posits that pre-suicidal behaviour is rooted in cognitive, social, and personality processes. The theory suggests that many suicide attempts are motivated by a desire to escape aversive self-awareness [7, 40]. More recently, the Integrated Motivational–Volitional Model explains the processes through which individuals move from suicidal thoughts to acting on those thoughts. This model draws on multiple theoretical perspectives to identify common, modifiable pathways for understanding suicidal behaviour [38, 41-43]. It highlights the roles of biological, psychological, and environmental factors, as well as those that facilitate the transition from suicidal ideation to behaviour at different stages of the process, thereby illuminating potential targets for intervention.

Furthermore, the accumulation of adversities within the family, sociocultural environment, and life history is emphasised in developmental theories as a key motivational factor for pre-suicidal behaviour [44, 45]. Another influential framework is the Three-Step Theory of Suicide, which proposes three central claims: first, that the combination of pain and hopelessness gives rise to suicidal ideation; second, that connectedness can prevent suicidal ideation from escalating; and third, that strong suicidal ideation may lead to a suicide attempt when individuals have both the capacity (dispositional, acquired, and practical) and access to the means [3, 46]. Despite the relevance and growing popularity of these theories, there remains a significant knowledge gap regarding pre-suicidal attitudes among the youth, which may partly explain the increasingly high-risk nature of youths' suicidal behaviour. Hence, there is an urgent need for the present study to advance understanding of the existing theories of pre-suicidal attitudes among the youth through a narrative review approach.

2. METHODS

2.1. Design

This study adopted a narrative review approach to examine critically and synthesise the psychological theories explaining pre-suicidal attitudes among the youth. The review focuses on four prominent theoretical perspectives: the Cognitive Model of Suicidal Acts, the Interpersonal Theory of Suicide, the Integrated Motivational–Volitional Model, and the Three-Step Theory of Suicide. A narrative approach was considered appropriate because the primary aim was to integrate and critically compare these theoretical perspectives, identify areas of convergence and divergence, and develop implications for early detection and prevention of pre-suicidal attitudes among the youth.

2.2. Search Strategy

The following electronic databases were searched to ensure a comprehensive collection of relevant and credible studies: PsycINFO, PubMed, Scopus, ResearchGate, and the Web of Science Core Collection (SSCI and SCIE). Publication dates were limited to articles published between January 2000 and December 2025. The search terms included "*non-fatal self-injury*, *suicide*, *attempted suicide*, *self-harm*, *deliberate self-harm*, *youth*, *adolescent*, *theories*, and *pre-suicidal model*".

2.3. Study Selection and Eligibility Criteria

The selection criteria were as follows:

- Studies with a population of adolescents and young adults within 12–25 years.
- Presentation, review, or empirical examination of a psychological theory of suicidality, with emphasis on cognitive, emotional, motivational, or interpersonal precursors (*i.e.*, pre-suicidal attitudes).
- Peer-reviewed journal articles, scholarly books, or book chapters from authoritative sources.

Any studies that did not meet the above conditions were excluded.

2.4. Synthesis and Analysis

A thematic narrative synthesis was employed to compare the four selected theories critically: the Cognitive Model of Suicidal Acts, the Interpersonal Theory of Suicide, the Integrated Motivational–Volitional Model, and the Three-Step Theory of Suicide. Each theory was narratively examined and critically evaluated in relation to its core constructs, developmental applicability, underlying mechanisms, and relevance to youths' suicidal attitudes. Points of convergence, divergence, and theoretical gaps were subsequently identified to inform the development of targeted interventions.

2.5. Theoretical Approaches to Pre-suicide Attitudes

Given the persistent rise in youths' involvement in pre-suicidal behaviours, it is evident that a single approach to understanding the motivations underlying this phenomenon is inadequate. Hence, there is a need for multiple approaches in the development of effective psychological preventive interventions, which could potentially help reduce the persistently high rate of youth suicide globally. This section summarises the key theoretical perspectives that provide unique insights into understanding the pre-suicidal attitudes that precede the manifestation of suicidal ideation.

2.6. Cognitive Model of Suicidal Acts

The first theory considered in this narrative study is the Cognitive Model of Suicidal Acts [47], which describes

youths' pre-suicidal attitudes as mental processes that develop from cognitive vulnerabilities through emotional distress and situational stressors. This model posits that early adversities, such as trauma, rejection, or chronic stress, shape the development of negative core beliefs in young people, leading them to view themselves as worthless, unlovable, or helpless. These cognitive schemas subsequently influence how these youths interpret later life experiences. Adolescence is generally considered a stressful stage of life [48]. Stressors at this developmental stage may include academic failure, discrimination, family conflict, or peer rejection, all of which may increase vulnerability to maladaptive cognitive processing, including selective attention to negative cues, rigid thinking, and catastrophic interpretations.

Studies have revealed that young people with pre-suicidal thoughts or suicidal ideation often experience difficulty shifting their mindset and exhibit a negative attentional bias, whereby their minds instinctively focus on negative cues in their environment-a phenomenon known as measurable cognitive inflexibility [47]. According to the CMSA, individuals selectively attend to suicide-relevant information when hopelessness-related cognitive schemas are activated in their memory in response to stress [49]. Fixation on suicide-related information increases as a result of this selective engagement with pre-suicidal cues, making it difficult for individuals to disengage their attention from stimuli that may have triggered the process. This, in turn, increases the risk of suicide attempts once individuals exceed their "threshold of tolerance" for distress. The model further emphasises that, as distress escalates, these cognitive processes foster hopelessness, leading individuals to perceive their difficulties as permanent and unsolvable. This process reflects three attentional mechanisms associated with pre-suicidal attitudes: selective attention, delayed attentional disengagement (*i.e.*, difficulty disengaging attention), and attentional fixation [50]. As a result of unsolved problems, these youths become vulnerable; they experience emotional overload, their cognitive constriction intensifies, their future-oriented thinking diminishes, and suicide may be evaluated more neutrally or even positively. When these beliefs co-occur with hopelessness and cognitive rigidity, permissive suicidal attitudes are reinforced. The transition from attitude to action occurs when acute situational triggers activate these vulnerabilities, transforming suicide from an abstract belief into an action-oriented appraisal perceived as acceptable, necessary, or inevitable.

Recent studies have also found that individuals with persistent pre-suicidal attitudes display facilitated disengagement from suicide-specific stimuli, potentially reflecting the automatic processing of suicide-related cognitions [51, 52]. Hopelessness has been identified as central to the cognitive processes underlying suicidal attitudes and as one of the strongest predictors of suicidal tendencies [9]. A meta-analysis further revealed that hopelessness has a medium-to-large association with suicidal ideation and a moderate association with suicide attempts, often serving as a stronger predictor than depression itself [53].

2.7. Interpersonal Theory of Suicide

Another theory that provides insight into the understanding of pre-suicide behaviour is the Interpersonal Theory of Suicide [54]. The theory is based on the assumption that people die by suicide because of their desire to do so. The theory proposes three constructs that are central to suicidal behaviour. Two of the three constructs are primarily related to suicidal desire, namely, thwarted belongingness and perceived burdensomeness, while the remaining construct focuses on the acquired capability for suicide. The theory believes that observable indicators-social connectedness variables-are associated with suicide, and they emerge when a fundamental human psychological need is unmet [55]. The theory also believes that a state of thwarted belongingness becomes inevitable as a result of the unmet need, and a desire for death is developed. Perceived burdensomeness is the second construct in this theory. It identifies three major negative conditions-family conflict, unemployment, and physical illness-as key risk factors associated with suicide [54]. The theory holds that when these factors are elevated, individuals are more likely to develop perceptions of being a burden to others [56]. According to the theory, youths exposed to pathogenic parental attitudes may interpret themselves as unwanted in the family and may even believe that their families would be better off if they were dead. This perception often leads to negative self-evaluation, feelings of rejection, and a desire to die. Acquired capability for suicide is the final construct of the theory and a major contribution of the Interpersonal Theory of Suicide. Identifying the key difference between individuals who desire suicide and those who possess the capability to carry out lethal self-harm is crucial at this stage [57]. Given the difficult, physically painful, and harrowing nature of death by suicide, only a few individuals possess the multifaceted capability required to confront and overcome these barriers [58]. Suicidal capability is acquired through learning, genetic predisposition, and habituation to painful and provocative life experiences [59, 60]. Self-inflicted violence such as non-suicidal self-injury and previous nonlethal suicide attempts represent provocative experiences, and together with mental disorders, they become important risk factors for suicidal behaviours, particularly among the youth [61].

Importantly, the Interpersonal Theory of Suicide distinguishes suicidal desire from suicidal behaviour by introducing the concept of acquired capability for suicide. While many adolescents develop permissive or favourable attitudes toward suicide, few progress to attempts. Acquired capability is theorised to develop through repeated exposure to painful or fear-inducing experiences, such as non-suicidal self-injury, physical abuse, exposure to violence, or suicide exposure among peers or through the media. Empirical studies in adolescent populations support associations between self-harm history, pain tolerance, fearlessness about death, and suicide attempts,

although the findings regarding habituation processes are more mixed than in adult samples [62]. In youth, social learning processes appear to play a particularly salient role in shaping acquired capability. Exposure to suicidal behaviour among peers or through digital media has been linked to increased suicide acceptability, reduced fear of death, and elevated risk of suicidal behaviour, consistent with contagion and modelling effects [48, 63]. Such exposure may accelerate the transition from suicidal attitudes to action, even in the absence of prolonged habituation to pain.

Overall, empirical findings largely support the Interpersonal Theory of Suicide's core propositions in youth populations, particularly regarding the roles of thwarted belongingness and perceived burdensomeness in shaping suicidal attitudes. However, evidence for acquired capability in youth may play a more prominent role than gradual fear habituation alone. This undermines the potential ability of the theory to explain pre-suicide attitudes and the development of interventions fully, but this does not in any way exclude the central insight that suicidal attitudes in youth are deeply rooted in their desire to die as a result of the three constructs of thwarted belongingness, perceived burdensomeness, and acquired capability for suicide.

2.8. Integrated Motivational-volitional Model of Suicidal Behaviour

The Integrated Motivational–Volitional Model [42, 64] is the third theory from which insight is drawn in understanding pre-suicide attitudes among the youth. The theory draws upon a range of existing theories of suicide and highlights three phases: the pre-motivational (background vulnerability, diathesis/stress factors), the motivational (risk-related thinking and perceptions), and the volitional (suicidal behaviours or actions) phases [65].

In the pre-motivational phase, adolescents' suicidal attitudes are shaped within the broader context of biological, psychological, and social vulnerability. Empirical research consistently demonstrates that early adversity, trauma exposure, family conflict, peer victimisation, academic stress, discrimination, and socioeconomic disadvantage are robust predictors of suicidal ideation in youth [66]. These stressors are particularly salient during adolescence, a developmental period marked by heightened emotional reactivity and ongoing maturation of cognitive control and emotion regulation systems [67, 68]. Neurodevelopmental research suggests that this imbalance may amplify youths' sensitivity to social threats and failures, thereby increasing their vulnerability to the cognitive and emotional processes described in the Integrated Motivational–Volitional Model [68].

The motivational phase represents the core mechanism through which suicidal attitudes are formed. This phase is driven by experiences of defeat-including perceived failure, humiliation, rejection, or loss of status-and entrapment, defined as the perception that there is no viable escape from these stressors. A growing body of youth-focused research provides strong empirical support for the centrality of defeat and entrapment. For instance, Cross-sectional and longitudinal studies indicate that entrapment is one of the strongest proximal predictors of suicidal ideation in adolescents, often mediating the relationship between stressors, such as bullying or academic failure, and suicidal thinking [69, 70]. Importantly, entrapment appears to explain the variance in suicidal ideation beyond that accounted for by depressive symptoms alone, underscoring its specificity as a mechanism of suicidal motivation.

When experiences of defeat evolve into a sense of entrapment, suicide may become cognitively constructed as an escape from unbearable psychological pain. At this point, adolescents' attitudes toward suicide often shift from rejection to conditional acceptance, wherein suicide is viewed as understandable or justifiable under extreme distress. Empirical studies in adolescent samples show that this transition is moderated by factors such as hopelessness, poor coping and problem-solving skills, maladaptive perfectionism, low social support, and negative self-conceptualisation [6, 42]. Conversely, protective factors-including supportive family relationships, positive peer connections, and adaptive coping-can buffer against the transformation of defeat into entrapment, thereby interrupting the consolidation of permissive suicidal attitudes [71].

The volitional phase explains why only a subset of youths who develop suicidal attitudes go on to engage in suicidal behaviour. Empirical evidence supports the Integrated Motivational–Volitional Model's assertion that the transition from suicidal ideation to action is governed by a distinct set of volitional moderators, including exposure to self-harm or suicide (through peers, family, or the media), acquired capability for suicide, impulsivity, access to lethal means, and a history of non-suicidal self-injury (NSSI). Longitudinal studies in adolescent populations indicate that exposure to peer self-harm and prior NSSI significantly increase the likelihood of suicide attempts among youths with existing suicidal ideation [62, 72]. These findings align with the Integrated Motivational–Volitional Model's emphasis on social learning and capability acquisition as critical mechanisms transforming suicidal attitudes into action-oriented appraisals.

Taken together, the empirical evidence strongly supports the Integrated Motivational–Volitional Model's utility in explaining youth suicidality. By integrating developmental vulnerability, motivational processes, and volitional moderators, the model highlights how suicidal attitudes in adolescents are neither inevitable nor static, but dynamically shaped by context, cognition, and social experience. This phase-based structure provides a robust framework for identifying developmentally sensitive intervention targets aimed at preventing the escalation of suicidal attitudes into suicidal behaviour.

2.9. Three-step Theory of Suicide

The last theory that was considered in this narrative review is the Three-Step Theory of Suicide [73], which

provides a parsimonious, developmentally relevant account of how suicidal attitudes in youth emerge and intensify through the sequential interaction of psychological pain, hopelessness, and diminished connectedness. The model is particularly well suited to adolescent populations, as it integrates emotional, cognitive, and social processes that are central to youth development.

In the first step, suicidal attitudes begin to form when intense psychological pain-arising from emotional distress, shame, loneliness, peer rejection, trauma, or academic pressure-is coupled with hopelessness, defined as the belief that this pain will not improve. Empirical research consistently demonstrates that hopelessness is one of the strongest predictors of suicidal ideation in adolescents, often exerting effects independent of depressive symptom severity [74, 75]. Developmental studies further suggest that adolescents' heightened emotional reactivity and limited future-oriented thinking amplify the impact of hopelessness, making suicide cognitively salient as a perceived escape from ongoing distress [68, 76]. Importantly, pain alone is insufficient to generate suicidal attitudes; it is the appraisal of pain as inescapable that initiates suicidal thinking.

The second step explains the strengthening of suicidal attitudes, proposing that suicidal ideation emerges when psychological pain exceeds connectedness. Connectedness encompasses supportive relationships with family and peers, as well as broader sources of meaning, such as cultural identity, religious beliefs, future goals, and a sense of purpose. Studies indicate that low perceived social support, peer victimisation, bullying, and social exclusion are strongly associated with suicidal ideation and permissive attitudes toward suicide [77, 78]. Longitudinal evidence suggests that declines in perceived connectedness precede increases in suicidal ideation, highlighting its protective function during adolescence [78]. When connectedness erodes, suicide may increasingly be viewed as acceptable or justified, marking a shift from abstract contemplation to conditional acceptance under sustained distress.

The third step differentiates suicidal attitudes from suicidal behaviour by introducing the concept of capacity for suicide, which includes dispositional, acquired, and practical components. Empirical studies in youth populations support this distinction, showing that many adolescents experience suicidal ideation without engaging in suicidal behaviour [7]. Capacity is shaped by dispositional traits such as impulsivity and pain tolerance, acquired factors such as prior non-suicidal self-injury (NSSI) or exposure to suicide, and practical access to lethal means. Strong evidence indicates that NSSI and exposure to suicidal behaviour among peers significantly increase the risk of suicide attempts among adolescents with existing suicidal ideation [62, 72]. Media exposure to suicide has similarly been linked to increased suicide-related cognitions and behaviours in youth, suggesting a social learning mechanism that reduces fear and normalises suicide [63, 78].

Across all three steps, the Three-Step Theory of Suicide underscores the central protective role of connectedness. Evidence abounds regarding the significant influence of interpersonal bonds, perceived meaning in life, and future orientation in interrupting suicidal pathways at multiple stages, even in the presence of significant psychological pain [79, 80]. The theory thus offers a developmentally grounded framework that explains how suicidal attitudes among the youth evolve from distress to acceptance, while also identifying clear targets for early intervention aimed at reducing psychological pain, restoring hope, and strengthening connectedness.

2.10. Integrative Synthesis

Across these models, suicidal attitudes in the youth are conceptualised as dynamic, developmentally embedded processes arising from the interplay of psychological pain, cognitive appraisals, and social contexts. The Cognitive Model of Suicidal Acts foregrounds maladaptive beliefs and hopelessness that frame suicide as an escape from distress, whereas the Interpersonal Theory of Suicide emphasises relational disconnection and perceived burdensomeness. The Integrated Motivational–Volitional Model highlights defeat and entrapment as critical mechanisms through which distress becomes inescapable, while the Three-Step Theory (3ST) of Suicide integrates cognitive and interpersonal elements within a sequential framework. Collectively, these theories converge in demonstrating that youths' suicide attitudes are not static beliefs but evolving constructions shaped by meaning-making, relationships, and perceived escape, with multiple opportunities for protective interruption.

2.11. Neurodevelopmental Integration of the Four Theories

Adolescence involves ongoing neurodevelopmental changes in executive control, emotion regulation, social cognition, and reward processing that heighten sensitivity to interpersonal experiences while regulatory capacities are still maturing. This developmental context integrates the four major theories of suicidal attitudes rather than serving as a separate explanation. The Cognitive Model of Suicidal Acts (CMSA) links developing cognitive control to rigidity, hopelessness, and attentional biases that impair reappraisal and alternative generation; the Interpersonal Theory of Suicide (ITS) emphasises intensified sensitivity to peer rejection, bullying, and social exclusion, which exacerbate thwarted belongingness and perceived burdensomeness; the Integrated Motivational–Volitional (IMV) Model best accommodates developmental variability by incorporating biological, psychological, and social vulnerabilities that influence emotional reactivity and responses to social stress, making defeat and entrapment particularly salient; and the Three-Step Theory highlights how immature emotion-regulation and future-oriented thinking amplify psychological pain and hopelessness while shifting the protective role of connectedness toward peer relationships. However, chronological age alone does not adequately identify risk, as neurodevelopment is

continuous and varies across individuals and domains; rather, risk emerges from interactions between specific factors-such as emotion regulation, cognitive control, coping flexibility, and sensitivity to social evaluation-and environmental and psychological vulnerabilities. Ultimately, integrating neurodevelopmental, cognitive, interpersonal, motivational, and affective mechanisms provides the fullest account of why suicidal attitudes may emerge and intensify during adolescence.

Table **1** compares four psychological models of suicide risk, Wenzel A and Beck AT's [46] Cognitive Model of Suicidal Acts (CMSA), Joiner's Interpersonal Theory of Suicide (ITS), O'Connor's Integrated Motivational-Volitional (IMV) Model, and Klonsky & May's Three-Step Theory (3ST) of Suicide-across seven key dimensions relevant to the youth. The table highlights the progression from purely cognitive frameworks toward integrative, stage-based models (IMV, 3ST of Suicide) that better address the developmental context, attitude–action gap, and neurodevelopmental considerations in youths' suicide risk.

3. DISCUSSION

This narrative synthesis highlights the interplay among four prominent theoretical models: the Cognitive Model of Suicidal Acts, the Interpersonal Theory of Suicide, the Integrated Motivational–Volitional Model, and the Three-Step Theory of Suicide. It also demonstrates how they collectively explain the motivations underlying pre-suicidal attitudes among the youth. Rather than offering competing explanations, these theories provide complementary perspectives that illuminate the distinct yet interrelated pathways through which young people may come to perceive suicide as thinkable, acceptable, or feasible.

Across theories, suicidal attitudes are conceptualised as dynamic developmental processes, shaped by psychological pain, cognitive meaning-making, and social contexts, rather than as static beliefs. The Cognitive Model of Suicidal Acts emphasises maladaptive core beliefs, hopelessness, and cognitive constriction, illustrating how suicide can become cognitively framed as an escape from distress [45, 81]. This perspective is particularly relevant during adolescence, a period marked by ongoing executive function development and heightened emotional reactivity, which may increase vulnerability to rigid, catastrophic thinking under stress [82-84]. Research evidence consistently supports hopelessness and negative self-schemas as robust correlates of suicidal ideation in the youth, although fewer studies have examined the full cognitive model longitudinally in adolescent samples [84, 85].

Table 1. Comparative table of theories.

Dimension	CMSA (Wenzel A and Beck AT)	ITS (Joiner)	IMV Model (O'Connor)	3ST of Suicide (Klonsky & May)
Core constructs	Negative core beliefs, hopelessness, cognitive constriction	Thwarted belongingness, perceived burdensomeness, acquired capability	Defeat, entrapment, motivational & volitional moderators	Psychological pain, hopelessness, connectedness, capacity
Developmental applicability	Implicit; limited explicit youth focus	Strong fit with adolescent social sensitivity	High relevance to adolescent stress and identity development	Moderate; developmental extensions emerging
Empirical evidence in the Youth	Moderate (hopelessness well-supported)	Strong for ideation; mixed for capability	Growing and robust for ideation	Growing but less extensive
Attitude–action distinction	Implicit	Explicit	Explicit and central	Explicit and central
Implications for intervention	Cognitive restructuring, emotion regulation	Enhance belonging, reduce burdensomeness	Reduce entrapment, strengthen coping, limit exposure	Reduce pain, restore hope, strengthen connection
Neurodevelopmental relevance	Executive control, cognitive flexibility, attentional disengagement and future-oriented thinking may influence cognitive responses to stress	Development of social cognition, identity, peer sensitivity and social evaluation may influence belongingness and perceived burdensomeness	Ongoing development of cognitive control and emotion regulation may interact with biological, psychological and social vulnerabilities in the pre-motivational phase	Developing emotion regulation, future orientation and connectedness may influence the interaction between pain, hopelessness, and suicidal ideation
Developmental vulnerability	Cognitive rigidity and reduced flexibility under acute stress may increase vulnerability	Heightened sensitivity to peer evaluation, rejection and social exclusion may intensify interpersonal risk	Developmental differences in coping and regulatory capacity may influence responses to defeat and entrapment	Heightened emotional reactivity and developing regulatory capacity may influence responses to psychological pain and hopelessness
Key developmental implication	Prevention should strengthen cognitive flexibility and adaptive problem-solving	Prevention should strengthen belongingness, family/peer connections and social support	Prevention should address developmental vulnerabilities before defeat and entrapment consolidate	Prevention should strengthen emotion regulation, hope, meaning, and connectedness

In contrast, the Interpersonal Theory of Suicide foregrounds relational experiences, highlighting thwarted belongingness and perceived burdensomeness as the central drivers of suicidal desire. These constructs closely map onto key adolescent developmental tasks, including identity formation, peer affiliation, and social validation. A substantial body of youth-focused research links interpersonal disconnection, bullying, and social exclusion with suicidal ideation [86-89]. However, evidence for the theory's acquired capability component remains mixed in adolescent populations, suggesting that transitions from suicidal attitudes to behaviour may occur through impulsivity or acute stressors rather than prolonged habituation to pain and fear [90-92].

The Integrated Motivational–Volitional Model offers a particularly developmentally sensitive framework by explicitly distinguishing between the formation of suicidal attitudes (motivational phase) and the enactment of suicidal behaviour (volitional phase). In this model, defeat and entrapment capture how repeated experiences of social failure, humiliation, or rejection-common in adolescent contexts-can transform distress into a perception of inescapability. This process fosters increasingly permissive or favourable attitudes toward suicide. Growing empirical evidence supports the relevance of defeat and entrapment in adolescent samples, positioning the Integrated Motivational–Volitional Model as especially useful for explaining why only some distressed youths develop suicidal ideation [93, 94].

The Three-Step Theory of Suicide integrates cognitive and interpersonal elements within a parsimonious structure, proposing that suicidal attitudes emerge when psychological pain and hopelessness outweigh connectedness [95]. This framework aligns closely with developmental psychopathology research demonstrating adolescents' heightened emotional reactivity and sensitivity to social disconnection. The theory's emphasis on connectedness as a protective factor is particularly salient for youth populations, although empirical tests of the full three-step sequence in adolescents remain limited [66, 78, 80].

Importantly, although the four theories were not originally formulated as neurodevelopmental models of adolescent suicidality, their core mechanisms can be interpreted meaningfully in contemporary developmental neuroscience. Adolescence is characterised by continued maturation of neural systems supporting cognitive control, emotion regulation, social cognition, and sensitivity to social evaluation. These changes do not imply a uniform developmental deficit or a fixed age at which vulnerability is greatest; rather, they provide a developmental context in which psychological and interpersonal vulnerabilities may be expressed differently across individuals and stages of adolescence.

Contemporary digital environments further intersect with these theoretical pathways. Social media can amplify cognitive vulnerabilities through negative social comparison, intensify thwarted belongingness *via* cyberbullying or exclusion, and increase exposure to suicide-related content, potentially normalising suicide and reducing fear. At the same time, digital platforms may provide support, validation, and opportunities for help-seeking, underscoring the contextual and bidirectional nature of digital influences on suicidal attitudes in youth.

Taken together, these theories converge in demonstrating that youths' suicidal attitudes are dynamic, developmentally embedded, and socially constructed. Integrating insights across models suggests that effective prevention must address cognitive appraisals, interpersonal connection, emotional regulation, and contextual exposure simultaneously. Future research would benefit from longitudinal, developmentally informed designs that explicitly examine how these mechanisms interact over time, particularly in digital and culturally diverse contexts.

3.1. Implications for Intervention: A Theory-driven Perspective

Integrating insights from the Cognitive Model of Suicidal Acts, the Interpersonal Theory of Suicide, the Integrated Motivational–Volitional Model, and the Three-Step Theory of Suicide underscores the need for multilevel, developmentally informed interventions that simultaneously target cognitive, interpersonal, emotional, and contextual processes.

From a cognitive model perspective, interventions should focus on identifying and modifying maladaptive core beliefs, hopelessness, and cognitive rigidity that frame suicide as an escape from psychological pain. Cognitive–behavioural approaches adapted for adolescents-particularly those emphasising emotion regulation, problem-solving, and cognitive flexibility-may reduce permissive suicidal attitudes by expanding perceived coping options.

The neurodevelopmental perspective further suggests that prevention should be developmentally calibrated rather than uniformly applied across the 12–25-year age range. Interventions should consider differences in cognitive control, emotion regulation, social cognition, and future-oriented thinking while avoiding assumptions that chronological age necessarily reflects neurocognitive maturity. For younger adolescents, interventions may place greater emphasis on concrete emotion-regulation and problem-solving skills, guided practice, family involvement, and strengthening social connectedness. For older adolescents and young adults, interventions may increasingly incorporate metacognitive strategies, autonomous problem-solving, future planning, and identity development. These distinctions should be empirically tested rather than assumed.

The Interpersonal Theory of Suicide highlights the importance of addressing thwarted belongingness and perceived burdensomeness. School- and community-based interventions that foster peer inclusion, reduce bullying, and strengthen family connectedness are likely to be especially effective for the youth. Therapeutic work should explicitly challenge beliefs of being a burden and enhance adolescents' sense of social value and mattering. Importantly, prevention efforts must extend beyond individual therapy to include relational and systemic

approaches, such as peer mentoring, teacher training, and family-based support.

The Integrated Motivational–Volitional Model provides a particularly actionable framework by distinguishing between motivational and volitional phases of suicidality. Interventions aimed at preventing the development of suicidal attitudes should focus on reducing experiences of defeat and entrapment by enhancing coping resources, fostering hope, and strengthening protective factors such as self-esteem and social support. For youths who have already developed suicidal ideation, volitional interventions-such as means restriction, safety planning, and limiting exposure to suicide-related content-are critical in preventing the transition from attitude to action. This phase-specific approach supports stepped-care and targeted prevention strategies.

Consistent with the Three-Step Theory of Suicide, interventions should prioritise reducing psychological pain, restoring hope, and strengthening connectedness. Early identification of emotional distress and timely support are crucial before pain becomes overwhelming and perceived as inescapable. Enhancing connectedness-to peers, family, cultural identity, future goals, and supportive institutions-serves as a powerful protective mechanism capable of interrupting suicidal pathways at multiple points.

Developmental considerations remain central across all these models. Adolescents' heightened emotional reactivity, evolving regulatory capacities, and sensitivity to social evaluation necessitate interventions that are proactive, accessible, and embedded in youths' everyday contexts. Digital environments represent both risk and opportunity: while online exposure may normalise suicide and intensify social comparison, digital platforms can also be leveraged for prevention through psychoeducation, moderated peer support, and crisis intervention tools. Overall, a theory-driven integration suggests that the most effective youth suicide prevention strategies are those that simultaneously target cognitive meaning-making, interpersonal connection, emotional regulation, and environmental exposure, while remaining responsive to developmental stage and sociocultural context.

4. STUDY LIMITATIONS

This review is limited by its narrative design, broad conceptual scope, and reliance on diverse theoretical and empirical evidence. Unlike a systematic review or meta-analysis, it did not use independent dual screening, formal quality appraisal, or risk-of-bias assessment, which reduces reproducibility and may increase selection, confirmation, and publication bias. Although several databases were searched, relevant studies using terms other than "pre-suicidal attitudes" may have been overlooked. Restricting the review to four theories also excludes biological, sociological, attachment, developmental, and minority-stress perspectives. The 12–25-year age range spans substantial developmental variation, while the theories were largely developed in Western, adult-focused contexts, limiting their cultural and intersectional applicability. Incorporating neurodevelopmental and digital-environment perspectives further extends the framework beyond the domains in which the four theories have been directly tested. The intervention implications remain broad and require evaluation for feasibility, cost, cultural fit, and potential harms, including stigma and false-positive screening. Future research should therefore use longitudinal, culturally informed, youth-participatory designs to test integrated pathways tailored to developmental stage. Despite these limitations, the review provides a foundation for further research on suicide-prevention interventions for young people.

CONCLUSION

This narrative review demonstrates that the contemporary theories of suicidality offer complementary and developmentally relevant explanations for the emergence of pre-suicidal attitudes in youth. Across models, suicidal attitudes are conceptualised not as fixed beliefs but as dynamic processes shaped by psychological pain, cognitive appraisals, interpersonal experiences, and contextual influences. The Cognitive Model of Suicidal Acts highlights maladaptive beliefs and hopelessness; the Interpersonal Theory of Suicide underscores belongingness and perceived burdensomeness; the Integrated Motivational-Volitional Model captures the transformation of defeat into entrapment; and the Three-Step Theory of Suicide integrates pain, hopelessness, and connectedness into a parsimonious pathway toward suicidal ideation.

These theories converge in recognising adolescence as a period of heightened vulnerability due to ongoing neurodevelopment, emotional reactivity, and social sensitivity. While no single model fully captures the complexity of youth suicidality, their integration provides a robust conceptual foundation for prevention efforts that intervene early in the formation of suicidal attitudes. Future research should prioritise longitudinal, developmentally informed studies that examine how these mechanisms interact over time, particularly in digital and culturally diverse contexts. From an application perspective, theory-driven, multilevel interventions that target pre-suicidal attitudes represent a critical opportunity for advancing youth suicide prevention and reducing the global burden of suicide among young people.

AUTHORS' CONTRIBUTIONS

The authors confirm their contributions to the paper as follows: A.S., A.M., and K.L.: Study conception and design; L.Z., K.L. and L.A.: Materials and data collection; K.L.: Analysis and interpretation of results; A.S. and A.M.: Draft manuscript. All authors reviewed the results and approved the final version of the manuscript.

LIST OF ABBREVIATIONS

3ST	=	Three-Step Theory
CAMS	=	Collaborative Assessment and Management of Suicidality

CMSA = Cognitive Model of Suicidal Acts

CT-SP = Cognitive Therapy for Suicide Prevention

DBT = Dialectical Behaviour Therapy

IMV = Integrated Motivational–Volitional

ITS = Interpersonal Theory of Suicide

NSSI = Non-Suicidal Self-Injury

SCIE = Science Citation Index Expanded

SSCI = Social Sciences Citation Index

CONSENT FOR PUBLICATION

Not applicable.

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CONFLICT OF INTEREST

The authors declare no conflict on interest, financial or otherwise.

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