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Psychology & Psychological Research International Journal
ISSN: 2576-0319

A Narrative Approach to Understanding and Using the Role of Hope in Adolescent and Emerging Adult Non-Suicidal Self-Injury

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Research Article

Volume 9 Issue 2

Received Date: March 04, 2024

Published Date: April 01, 2024

DOI: 10.23880/pprij-16000409

Abstract

Background: Non-suicidal self-injury (NSSI) is highly prevalent in adolescence and represents a maladaptive coping strategy. Insufficient attention has been paid to NSSI as a critical factor for suicide, the second leading cause of death in adolescents and young adults. Hopelessness frequently factors into suicide and suicide attempts.

Aims: We consider NSSI from the clinician's perspective in assessment, case formulation and treatment considerations with the added perspective for the role of hopefulness in NSSI and suicide.

Method: Google and PubMed databases were searched to consider the role hopefulness plays in both NSSI and suicide of youth and young adults in assessment, clinical course, interventions, and outcome. Key words included adolescents, adults, children, NSSI, hope, assessment, treatment, clinical course, and outcome. Reverse citations were also conducted to assure timeliness.

Results: Increasing attention has been paid to stratification of commonly considered risk factors for suicide and suicide attempts in the target population. Rationale for considering NSSI as a critical suicide risk factor and for hope's role in the continuum of suicidal behavior is documented and emphasized. Relevant models for suicide are described to support and provide clinicians guidance to consider NSSI and hopefulness in case formulation, determining safety, and developing useful interventions for youth engaging in or contemplating NSSI and/or suicide.

Conclusions: NSSI is a major risk factor for suicide in youth. Hope plays major roles in NSSI and suicide and should be considered in assessment, case formulation, and interventions in youth manifesting NSSI and suicidal, ideation, and behavior.

Keywords: Adolescent; Emerging Adult; Non-Suicidal Self-Injury

Abbreviations: IPTS: Interpersonal-Psychological Theory of Suicide; 3ST: Three-Step Theory; ICT: Intensive Contextual Treatment; TA: Therapeutic Assessment; CBT: Cognitive Behavior Therapy.

Introduction

Once considered a symptom limited to individuals with psychosis, borderline personality, and prison populations, NSSI is globally endemic. Lifetime prevalence estimates in the general adolescent non-clinical school population vary from 7.1 to 38.6% across countries with lifetime aggregate NSSI prevalence of 22.0% (95% CI 17.9–26.6) from 29 studies comprising 64,484 adolescents, but with significant heterogeneity detected [1]. Much higher rates are reported in clinical populations, sometimes ranging from 40 to 80%.[2] Thus NSSI has become a key health problem for adolescent and college health in the past decade [2]. At least 20 distinct

forms of self-injury have been described [3] with self-cutting the most common [4] and adolescence the peak period for NSSI onset [4-7]. Common co-occurring conditions are like those found in suicidal youth[6] with many shared environmental, interpersonal factors [2].

The purposes or motivations to engage in NSSI involve regulating interpersonal environments and intrapersonal, painful emotional states [7]. The intent may be to reduce intolerable negative cognitions or emotions, generate a sensation to relieve a dissociative, numb feeling, to self-punish, or to communicate the severity of experienced internal pain [8]. NSSI may accompany an episode with suicidal ideation (SI) and/or suicide attempts (SAs) and function as a means to avoid suicide but may also serve in developing the capacity to accept the pain and decrease fear associated with a SA [9-11]. Yet, about 66% of college students indicating current or past self-harm reported never having considered or attempted suicide [3].

A sense of hopelessness has been accepted as a critical risk factor in suicide. We urge consideration for the degree of hopefulness as playing a key role in NSSI, SAs and reducing suicide risk. Klonsky and associates [10] after reviewing models to explain why individuals make a SA, focus on the differences between the large group of individuals with SI but no SA. Considerable evidence indicates that pain, hopelessness, and related variables motivate suicidal desire, but the capability for suicide helps differentiate attempters from those engaging in suicidal ideation [10]. Insufficient attention has been paid to the construct of hopefulness in psychiatric and non-psychiatric medical diseases and NSSI.

Hope has been defined as desiring an outcome that is accompanied by expectation or belief in its fulfillment. The concept has been referenced across many contexts and has both affective and cognitive elements; it can be differentiated as a dispositional trait, and reflects cross-situational appraisals of a person's goal-related, relatively enduring capacities to attain or move towards those goals. Hope has been used as a malleable construct to target in therapy and is a predictor of therapeutic outcome in psychotherapy and a malleable construct that can be targeted in treatment [12].

Better psychological adjustments, academic achievement, and physical health are found in individuals with high hope, as hope is negatively related to psychopathology. Negative life events bring about fewer depressive symptoms in youth with greater hope Jiang #23 now. This may explain how Hope therapy as an intervention is gaining acceptance as a clinical tool for multiple psychological disorders. Cheavens #19 or new #12. This approach requires the individual to: 1) set goals for themselves; 2) develop pathways with small steps to achieve those goals after listing and assessing all options; and 3) be motivated with the necessary goal-directed motivation.

Methodology

A literature review in Google Search and PubMed was conducted to consider the role hopefulness plays in both NSSI and suicide of youth and young adults in assessment, clinical course, interventions, and outcome. Key words included NSSI, hope, assessment, treatment, clinical course, and outcome. Reverse citations were also sought to assure timeliness. Secondary sources were preferred to be brief.

Results

Of proposed models to explain suicidal behavior in order to inform suicide prevention and treatment, the Interpersonal-Psychological Theory of Suicide (IPTS) [11] and the Three-Step Theory (3ST) [10] best relate to NSSI's role in suicide. IPTS' basic concept is that the suicidal person has both the desire to die and capability to act on that desire ("wants to and can"). IPTS posits thwarted belongingness (feelings of isolation from valued social groups such as peers and family) or perceived burdensomeness (negative emotions towards self from feeling that one negatively impacts on others). This leads to passive SI; then hopelessness sets in, and more active SI develops as those feelings stabilize and become unchanging. Active suicidal intent only develops when fear of death and injury can be overcome; the actual attempt occurs when an individual has both the desire to commit suicide and the ability to do so. NSSI may serve to attenuate the fear of pain [11]. It basically operates as a maladaptive coping means in the expectation/hope that the emotional pain will subside through differing potential mechanisms.

Similarly, 3ST also labeled "ideation to activation" argues that SI develops from pain, usually emotional or psychological, hopelessness, or other factors including thwarted belongingness, burdensomeness, impulsivity, and desire for help or to communicate distress. The second step is attained when this pain becomes so strong that it exceeds the person's connectedness that serves to protect against rising SI in those at risk from pain/hopelessness. The final step in progressing from SI to an attempt involves the capacity to make an attempt. This comprises the innate capacity (biological most likely), the acquired capacity (habituation over time to experienced injury, pain, fear, death), and the practical capacity of knowledge and access to lethal means [13]. Thus, NSSI increases acquired capability for suicide through repetitive self-injury and habituation to pain; hence as in IPTS, linking NSSI and perceived loneliness in conjunction with acquired suicide capability allows SI to

transition to suicidal behavior.

There are clear reasons why NSSI, an easily recognized or reported behavior, should alert clinicians of significantly increased suicidal potential in adolescents [4,7] and in emerging adults [14-18], even as depression, SI and SAs represent major risk factors for future suicidal behavior. The Avon Longitudinal Study of Parents and Children considers youth at ages 16 and 21 years who completed a detailed evaluation of SI, NSSI, and other potential psychosocial and mental health suicide risk factors into groups with no history of SA, those reporting SI, those reporting NSSI, and those reporting both SI and NSSI. By age 21 years, the highest risk for transition to first suicide attempt were those with SI at age 16 years: reporting NSSI (Odds Ratio 2.78, p=0.006); cannabis use (Odds Ratio 2.61, p=0.029); and other illicit drug use (Odds Ratio 2.47, p=0.045) [19].

Taking these results and similar results from other studies, the combined history of SI and NSSI or a prior SA and NSSI markedly increase the risk for suicide, with NSSI considered the strongest predictor of eventual death by suicide [20]. These relationships are critical since suicide risk models to predict future SAs and death have near zero accuracy for adults [17] and add little value above current standard psychiatric care for youth [21]. The presence or absence of hope is proposed as a means to enhance our ability to more accurately predict prognosis and outcome for those with or at risk for NSSI and SAs [22].

Hope and hopefulness are beliefs with cognitive and emotional aspects in the possibility of a desired positive future. They comprise goals, agency thinking, and pathways thinking and have been associated with psychological and physical well-being. Goals represent mental targets to guide behaviors, agency the willpower or energy to move towards a goal, and pathways, the perceived ways to achieve a goal [22]. These components are negatively correlated with depression, and negative expectations, and positively correlated with positive expectations and improved pain tolerance perception. Estimates for example between currently depressed and previously or never depressed controls experiencing future positive events [$F(2, 146) = 6.39$, $p < 0.01$] differed significantly as did estimates of others experiencing future positive experiences and [$F(2, 96.96) = 3.17$, $p < 0.05$]. Similar differences were demonstrated in estimates of clinically depressed versus the other groups regarding their future negative experiences [$F(2, 146) = 6.35$, $p < 0.01$], but not with others future negative experiences [23,24].

From responses of 1,026 Chinese secondary school students [13] reporting their depressive symptoms, hope, and NSSI experiences, a study revealed NSSI and depressive symptoms as negatively associated with trait hope's pathways and agency thinking (ps < 0.001). Interestingly among female adolescents, pathways thinking but not agency thinking, attenuated the association between depressive symptoms and NSSI. They suggest their results may to some explain that an important correlate of individual resorting to NSSI is their inability to reduce their negative emotions by accessing more effective strategies. NSSI as an avoidant or escaping maladaptive coping strategy may be explained for adolescents with low agency thinking, insufficient motivation or self-efficacy to use adaptive coping strategies to address their depressive moods or negative thinking [13] and thus possibly avoid a SA. Thus, the NSSI as a harbinger of increased suicide risk may offer the clinical opportunity to initiate or support building more adaptive skills and of encouraging self-efficacy and motivation for broadening their appraisal of their situation.

Further analysis of the Chinese study indicates through structural equation modeling that gratitude and hope reduce the risk of engaging in adolescent NSSI when accompanied by the indirect effects of self-compassion and family experience [24]. Hope also buffers against psychological distress for both individuals and their parents [25] Both hope and self-efficacy were documented to buffer the link between perceived stress as demonstrated in undergraduates during the COVID-19 pandemic; hope's role appeared twice as effective as self-efficacy. By influencing coping appraisals through secondary appraisal, hope may produce a sense of mastery over depressive symptoms and feeling stuck; whereas self-efficacy was only associated with less anxiety [22].

Determining presence or absence of NSSI and presence or absence of hopefulness can aid in predicting suicidal risk. Research cited above documents significant negative correlations between hope and depressive symptoms. Several screening and monitoring tools have been researched for both NSSI and hope. However, no accepted standard scale for either exists.

NSSI treatment is traditionally guided by case formulation with suicide potential a major concern. Randomized, controlled NSSI treatment trials are limited that significantly and specifically reduce NSSI in adolescents. Those with relevant improvements in anxiety and depression symptoms include Cutting Down Program; Developmental Group Psychotherapy; Emotional Regulation Individual Therapy for Adolescents; Intensive Contextual Treatment (ICT); Therapeutic Assessment (TA); and Treatment for Self-Injurious Behaviors [20].

A meta-analysis and systematic review that included four and five studies respectively estimated significantly improved standardized mean difference in NSSI were −0.53

(95% CI: −0.82, −0.25), in depressive symptomatology it was −0.59 (95% CI: −0.82, −0.36), and in global functioning at 0.62 (95% CI: 0.34, 0.91), but low evidence certainty using the GRADE method [26]. Similar results are available for a systematic review of NSSI for Hispanic and African-American adolescents treatment trials [20]. The role played by hopefulness is not considered by reviews or studies of CAEA engaging in NSSI.

Future efforts to demonstrate the relationships between NSSI, suicide and hopefulness are needed. Development of standardized, valid and reliable scales for screening and monitoring will be essential to such research initiatives as well as to informing clinical case formulation, and individualized, informed preventive and therapeutic interventions.

Discussion

NSSI represents a significant risk factor in suicides of adolescents and emerging adults. Hope is a factor or construct that appears to modify and mediate both NSSI and suicide in this population. A growing body of literature has begun to define its role in suicide prevention efforts. Clinicians are accustomed to asking about hopelessness and rarely think about hopefulness and its implications for case formulation, monitoring treatment and outcomes.

The functional differences between hope and optimism have been demonstrated. Optimism predicts specific expectations in uncontrollable situations, while hope predicts specific expectations in controllable situations [27]. Presence of both ameliorate anxiety and depression, and result in less severe pain and better physical functioning [28].

In college students, hope had a significant indirect effect on final grades through modifying grade expectancy which did predict final grades by significantly predicting increases in positive affect and life satisfaction over the semester, whereas optimism predicted decreases in negative affect. Recommendations for applying hope-related insights to targeted interventions for improving college student learning by identifying undergraduate students at risk for academic underachievement can be used in youth manifesting NSSI thoughts and behaviors.

This includes expectations from the assessment about success of treatment and ending NSSI behaviors commonly employed in cognitive behavior therapy (CBT) by writing a personal goal for reducing/eliminating the NSSI with detailing concrete steps for goal achievement; and listing likely barriers and generating strategies to maintain their motivation to pursue their treatment goals. Positive self-talk statements and visualization of steps to overcome barriers in “goal mapping” and related exercises have been shown to increase learning, and demonstrated as feasibly deliverable online [29], and can be expected to lower or eliminate NSSI and suicide risk. Cheavens and Whitted provide a table with Hope Intervention Strategies, listing goals, pathways, and agency strategies [12].

These strategies with their multiple pathways and active encouragement and monitoring of hope are easily incorporated into documented evidence-based treatments. Hope therapies have been evolving and growing in number, with strategies used both as components of cognitive-behavioral packages and as standalone interventions [12]. Domain-specific approaches for parent involvement in psychiatric and other care of their ill offspring are suggested as well suited for hope based interventions by providing more nuanced interventions and understanding of the relationship between parenting outcomes and hope [12]. The process should begin with awareness and recognition of hopefulness in case formulation and therapeutic interventions for adolescents and emerging adults at risk for NSSI and suicide, particularly immigrants, those who have been bullied, or have experienced other affective, neuropsychiatric, and trauma-related psychiatric disorders [30]. Hope may function differently and is increasingly being studied across cultural and other identity groups, and in certain situations is related to lower well-being [31]. NSSI may be seen as a maladaptive coping strategy deemed as a hopeful solution to allow survival from an overwhelming situation and treated as a sentinel of high suicide risk and addressed as such.

Conclusions

Innovative approaches to reduce the increasing prevalence of suicide and NSSI are needed. NSSI is a significant risk factor for suicide in youth when associated with either or both SI and past SAs. Hopefulness is a factor to consider for mitigation and prevention of both NSSI and suicide. Presence or absence of hope should be given careful consideration in awareness, assessment, case formulation, treatment planning, and interventions for adolescents and emerging adults using or at risk for NSSI, manifesting SI, and at high risk for suicide. Further research is needed to better inform clinical practice.

- **Funding**: This research received no specific grant from any funding agency, commercial or not-for profit sectors.
- **Acknowledgments:** None.
- **Author Contribution**: Dr. Petti conceptualized the study, conducted the literature review, analyzed the data, wrote the first draft, and reviewed and modified the subsequent and final drafts. Dr. Chen assisted in the literature review, reviewed and modified study drafts, and approved the final draft.

- **Data Availability**: The materials supporting the findings are available in the cited studies and data bases.

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