The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 11, Issue 1, January- March, 2023
DIP: 18.01.111.20231101, DOI: 10.25215/1101.111
https://www.ijip.in

Research Paper

The Pattern of Non-Suicidal Behaviour and Mediating Role of Emotion Regulation Strategies in Adolescents

Juleemol George[1]*, Dr. Jaya A T[2]

ABSTRACT

Nonsuicidal self-injurious behaviour (NSSI) is a concern for adolescents' mental health issues and acts as a gateway for future suicide attempts or other mental health issues later. The study explored the occurrence and characteristics of Non-Suicidal Self Injurious Behaviour in adolescents and the role of emotion regulation strategies. A total of 702 Adolescents from higher secondary schools in different districts of Kerala were selected as participants by stratified random sampling and completed the Functional Assessment of Self-Mutilation (FASM) and Cognitive Emotion Regulation Questionnaire (CERQ). 9.8% of the participants reported NSSIB with a mean age of 15.6 years. The most common method is banging the head on the wall (23.1%) and the most commonly endorsed reason for NSSI was to get attention from someone (53.6%). All strategies of Non-adaptive emotion regulation dimensions such as Rumination, Catastrophization, Self-Blame & Other Blame and Adaptive coping strategies as Cognitive Reappraisal and Self-Acceptance shows statistically significantly difference in two groups. The study implicates the need for awareness of the increasing rate of NSSIBs and to plan targeted intervention based on adaptive and Non-Adaptive Emotion Regulation Strategies in adolescents.

Keywords: *Non-Suicidal Self Injury, Adolescents, Adaptive Emotion Regulation, non-adaptive Emotion Regulation.*

Non-Suicidal Self Injurious Behavior(NSSIB) is a growing concern among adolescents and young populations for the last two decades. Adolescence is the period in which individual faces challenges of increased independence, academic stress, new opportunities and social situation. NSSI has become a significant mental health issue and a significant predictor of death among young adults globally. NSSI behaviour is not intended to die most of the time whereas these acts become a coping function to reduce stress, anxiety and other emotion (Gratz, 2007; Klonsky, 2007). But it leads to physical, social and emotional harm in individuals and may become a gateway to future suicide due to associated psychological factors (Klonsky, 2013). The prevalence of NSSI in European countries ranges from 17% to 38.7 %. Among that, 6.7% met the criteria of the DSM-V

[1]Ph.D. Research Scholar, Department of Psychology, Prajyoti Niketan, Pudukad, Thrissur, University of Calicut
2Asst. Professor, Dept. of Psychology, Prajyoti Niketan College, Pudukad, University of Calicut,
*Corresponding Author

Received: November 18, 2022; Revision Received: February 25, 2023; Accepted: March 01, 2023

diagnostic manual of NSSIB (APA, 2015) under reaserch area. The prevalence of NSSI raises concern about their reliability due to the methodological and nomenclature disparities throughout the old literature, but a pooled prevalence among a non-clinical sample of adolescents was found 17.2% (Swanell et al, 2014). Cross-cultural variations in prevalence and patterns differ in methods, limited research in India makes comparisons difficult (Thippaiah et al., 2021; Aggarwal, 2017; Muehlenkamp et al., 2012; Plener, Libal, Keller, Fegert, & Muehlenkamp, 2009; Bakken, 2021). Most Indian studies have examined this behaviour in association with psychotic, developmental or other disorders, and largely situated in either general or psychiatric hospital settings and family conflicts, failures in academics, unfulfilled romantic ideals, and domestic violence were found as causal factors. (Pillai, Andrews & pattel, 2009; Gandhi, Luyckx, Maitra, & Claes, 2015; Rangeeth, Moses & Reddy, 2011). In a study in South India, 31.2% of junior college students with a mean age of 15.9 years were reported NSSI with multiple methods in which individuals mostly focused on the emotional regulation of their internal state (Kharsati & Bhola, 2015). Even though self-harm behaviour decreases from 40% adolescents to 18.7% in young adults. But adolescents with repetitive NSSI showed significantly high difficulties of stress, anxiety, and difficulties in emotion regulation 10 years later in their adulthood (Daukantaite, 2021). Previous literature indicates that occasional engagement in self-injury is a strong risk factor for mental health problems later. Emotion dysregulation is associated with a higher risk for Non-Suicidal Self-injurious behaviour regardless of age or sex (Wolff et al., 2019).

Purpose of the present study

The objective of the current study was to know the pattern and prevalence of self-injurious behaviours in adolescents in Kerala and to find out the difference in adaptive and non-adaptive Emotion regulation strategies.

METHOD

Sample

A total of 702 students were recruited for this study from different higher secondary schools in Kerala using a stratified sampling method. Participants age ranging from 15 to 19 years without any history of neurological and cognitive deficits. Different government and private schools were contacted for the study after obtaining ethical clearance from the Research Centre. Both parents/guardians and the participants provided informed consent and the participants were informed that participation was voluntary, responses were anonymous. 39 participants were excluded lack of written consent, incomplete data or not being willing to participate in the study leaving a sample size of 702 participants. Questionnaires were administered in class groups during school time after an awareness programme.

Instruments

The personal data sheet provides important information describing the socio-demographic profile of the information like age, education, parents' job, and economic status.

Suicidal behaviour was measured using the Functional Assessment of Self-Mutilation (FASM). The first part consists of a checklist of 11 different self-injurious behaviours. The second part of the FASM consists of 22 statements assessing reason for self-injurious behaviours (Lloyd, Kelley & Hope, 1997). The FASM has demonstrated acceptable psychometric properties within adolescent samples (Guertin et al. 2001; Esposito et al. 2003; Penn et al. 2003), yielding adequate internal consistency (coefficient α=0·65–0·66) for both

minor and moderate/severe SIB scales. The FASM has been used previously in an Indian study with youth (Kharsati & Bhola, 2013).

Cognitive Emotion Regulation Questionnaire (Garnefski, 2007): The Cognitive Emotion Regulation Questionnaire (CERQ) is the instrument developed to explicitly measure cognitive strategies for emotion regulation that individuals may use in response to threatening or stressful life events. The 36-item CERQ contains nine conceptually distinct subscales: five for adaptive strategies (acceptance, positive refocusing, refocusing on planning, positive reappraisal, and putting into perspective) and four maladaptive strategies (self-blame, rumination, catastrophizing, and blaming others). The items in the questionnaire are structured in the 5-point Likert spectrum and all four questions evaluate one factor. The CERQ has shown good reliability and validity and the subscales had good internal consistency, with alpha coefficients ranging from 0.65 (putting into perspective) to 0.91 (refocusing on planning) (Garnefski, 1999).

RESULTS

There were 702 Adolescents for the final analysis with an average age of 15.6 years and gender distribution of male was 50.4% and female was 49.6%, taken equally from private and government schools in five districts of Kerala, Thiruvananthapuram, Idukki, Kottayam, Ernakulam and Thrissur.

Table I Self-injurious methods, plan, previous thoughts and experience of pain after SIB

Method, previous thought and pain of SIB		**Frequency (%) (n=702)**
	Without a history of Self Injury	633 (90.2)
	With history of Self injury	69 (9.8)
Methods	Making Scar on the wrist	9 (13)
	Scratch the wrist with the blade	13 (18.8)
	Banging head on the wall	16 (23.1)
	Making scar with compass	12 (17.3)
	Hitting leg on the wall forcefully	12 (17.3)
	Other methods	7 (10.1)
Number of methods	One method	38 (55.5)
	2-3 methods	19 (27)
	2-5 methods	12 (17.3)
Pre thought about the harm	None	24 (34.7)
	<one hour	19 (27.5)
	>one hour but<24 hours	9 (13.4)
	>one day but <one week	8 (11.5)
	>One week	9 (13.4)
Experience of pain	No pain	17 (24.6)
	Little pain	38 (55.5)
	Moderate pain	8 (11.5)
	Severe pain	6 (8.6)
	Age of onset	15.6 years

Table 1 shows that the prevalence of SIB in the past year was 9.8%. The most common method endorsed by the participants was banging the head on the wall (23.1%), followed by scratching the wrist with a blade (18.8%), scratching with a compass from the instrumental box and hitting the leg on the wall forcefully (17.3%), and 13% of participants make the scar on the wrist with any sharp objects like broken bottle or blade. The majority of participants

(55.5%) reported a single method for self-harm, 27% were two or three methods and 17% used more than three methods. A majority of those endorsing SIBs did not think about the acts before engaging in such acts (34.7%) or had thoughts only for few minutes (27.5%). This indicates a relatively impulsive pattern of engaging in NSSI. Most participants indicated experiencing little (55.5 %) or no pain (24.6%), moderate pain (11.5%) and Severe pain only by 6% during the self-injury.

Table II: Reason for NSSI among Adolescent students.

Reason for SI	Frequency(%) (n= 69)
To feel something even though it was a pain	6 (8.69)
To get attention	1 (1.59)
To avoid something unpleasant	8 (11.59)
To get control of a situation	6 (8.69)
Try to get a reaction from someone	2 (2.89)
To receive more attention from parents or friend	37(53.6)
To feel numb or empty	1 (1.45)
To punish yourself	2 (2.89)
To be like someone you respect	2 (2.89)
To stop bad feeling	2 (2.89)

The most common reason for self-injury reported by the participants were 'to get attention from someone in an emotional relationship' (53.6%), followed by 'to avoid something unpleasant' (11.6%), 'to feel something even though it was a pain' (8.69%). Other reasons endorsed in a reason for suicidal behaviour were 'to be like someone they respect' (2.9%), 'to stop bad feelings' (2.9%) and 'to get a reaction from someone (2.9%), and 'to get control of a situation.

Table III: Mann Whitney U test for significant differences between the Mean Rank of Cognitive Emotion Regulation strategies on a group of adolescents with and without SIB

Cognitive Emotion regulation Strategies	Mean Rank		Mann Whitney U test	Z
	With Self-injurious Behaviour	Without self-injurious Behaviour		
Self-Blame	419.82	344.05	17124.500	2.971**
Acceptance	287.18	358.51	17400.50	2.830**
Rumination	452	340.44	14839.50	4.402**
Positive Refocusing	319.77	354.96	19649.00	1.382
Positive Reappraisal	302.93	356.79	18487.00	2.107*
Refocus on Planning	338.62	352.90	20950.00	0.560
Putting into perspectives	367.09	349.80	13108.50	0.681
Catastrophization	478.02	337.71	13108.50	5.493**
Other blame	457.57	339.94	14519.50	4.614**

***** P= > 0.01, * P= > 0.05***

The Mann-Whitney U test was done to compare the difference between adaptive and non-adaptive Cognitive Emotion regulation strategies among adolescents with self-injurious and without self-injurious behaviour. From table-III it is clear that all the negative coping strategies such as self-blame (Z=2.971, P=.003), rumination (Z= 4.402, P=.00). Catastrophization (Z=5.493, P=.00) and Other Blame (P=4.614, P= 0.00) were shown statistically significant difference, Since P value is less than 0.01, the null hypothesis is

rejected at 1% level in all Negative Coping Strategies between adolescence with self-injurious behaviour and without Self Injurious Behaviour. In adaptive Emotion Regulation Strategies, Acceptance (Z=2.830, P=.005) and Positive Reappraisal (Z=2.107, P=0.03) were shown statistically significant. In Acceptance, the P value is less than 0.01 and the null hypothesis is rejected at a 1% level. In Positive Reappraisal P value is less than 0.05 and the null hypothesis is rejected at 5% level. There is no significant difference between adolescents with self-injurious behaviour and adolescents without SIB in Positive refocusing (Z=1.383, P= 0.167), refocus on planning (Z= 0.561, P= 0.575) and Putting into Perspectives (Z=0.681, P= 0. 496) since P value is greater than 0.05 level. Hence the null hypothesis is accepted at a 5% level with regard to positive refocusing, refocusing on planning and putting into perspective.

DISCUSSION

In present study at school community level, 9.8% of adolescents reported Self Injurious Behaviour. Our finding was consistent with prior studies (Drum et al, 2009). A pooled Prevalence among adolescents found earlier was 17.2 % (Swannel, 2014). Prevalence of Nonsuicidal Self Injurious Behaviour among non-clinical samples raises concern about their reliability due to the influence of methodology and terminology. In the current study, most participants harmed themselves by head banging, hitting their leg forcefully on a wall or making scratches on the wrist with any sharp objects like a blade or compass from the instrumental box which is the most easily and available means and the impulsivity leads to action which is consistent with earlier reports. Most of the adolescents reported reason or stress for self-injurious behaviour to get attention from someone in an emotional relationship followed by avoiding something unpleasant and feeling something even though it was a pain. The other reason for people who engaged in self-injurious behaviour is to be like someone they respect, to stop bad feelings or to get a reaction from someone. Relationships play a pivotal role during the period of adolescence and stress due to relationship difficulties leads to emotional disturbances and acts of self-injury. Earlier studies reported stress related to academic achievement and relationship problems in accordance with previous Indian studies carried out on school students (Singhal, Manjula and Sagar, 2014; Bhasin, Sharma& Saini, 2010). Current findings again indicate that they have no long-term plan or thought before acting and not experiencing pain or little pain which is consistent with previous studies that survivors of suicide attempts have less than five minutes between the decision to attempt suicide and the actual attempt (Simon, 2001). People with a history of NSSI display diminished pain perception. Earlier one study specified that emotion dysregulation has an association with NSSI and pain tolerance (Franklin, et al, 2012). It is also in accordance with previous literature that impulsivity associated with ADHD would be a high risk for engagement in Self injurious Behaviour (Bakken, 2019). Inadequate control of aggressive impulses might be a greater indicator of risk for an impulsive suicide attempt than depression. Even though the self-harm behaviour decreases from the adolescent period to adulthood it is observed that stable repetitive NSSI in adolescence is a strong risk factor for mental health problems in young adulthood and that occasional engagement in NSSI in adolescence is an indicator of vulnerability for poorer mental health in their adulthood (Daukantaite, 2021).

The study evaluated the relationship between Emotion Regulation strategies and found that greater difference in all Non-Adaptive Cognitive Emotion Regulation (CER) strategies in the self-injurious group compared to the non-self-injurious group which tells that SIB was related to ruminating thoughts, catastrophizing after a stressful event or blaming self or other

for an event. Emotion Regulation is one of the most important factors that contribute after an event. Linehan, in his research on Borderline Personality Disorder and other research also conceptualized Emotion regulation as a strategy for Self-injurious Behaviour (Gratz, 2003; Klonsky, 2007). Our findings are supported by the earlier finding that Rumination and catastrophization might be a predictor of NSSI (Klonsky& Muhlenkamp, 2007; Nock,2007). Observation from current research that high-level adaptive strategies such as self-acceptance and positive appraisal in the non-self-injurious group would enlighten the therapists and interventionists to make plans to reduce negative CER and increase self-acceptance and cognitive reappraisal. The adaptive strategies of acceptance and positive reappraisal may have more cognitive resources to help them remain well-regulated in their daily lives in the midst of academics and emotional struggles. Cognitive reappraisal is a potential factor for regulating their emotions and the absence of self-injurious behaviour. It is consistent with Prior Studies that recent engagement in self-injurious behaviour is associated with poor Cognitive Reappraisal (Hasking et al, 2017; Robinson et al, 2019; Wolff, 2019). Individuals who experience emotional dysregulation, especially those who have heightened emotional reactivity and those who have difficulties in accessing effective emotion regulation strategies are at increased risk for engagement in NSSI (You, et al. 2018). Garnefski and Kraaij (2007) suggested the cognitive approach of consciously monitoring and regulating the information that directs to regulating the information which leads to emotional arousal. The potential mechanism of Emotion Regulation in Individuals with Self injurious behaviour and identifying specific strategies of emotion regulation of individuals may provide future targets of treatment or intervention. Wolf et al, 2019 highlight the importance of a better understanding of emotion dysregulation as a treatment target for preventing NSSI. Our findings suggest that additional effort is needed to understand interpersonal as well as psychological characteristics that influence the risk for impulsive and common self-injurious behaviour in the community, whereas previous research mostly focused on depression or anxiety. The majority sought help from their own circle, family or friends but did not consider professional help which reflects a lack of awareness and attitude towards mental health problems and help-seeking.

CONCLUSION

Increasing the rate of Non Suicidal Injurious Behaviour in Higher Secondary Schools adolescents shows the need for mental health care assistance and proper assessment in every stage of development. Adolescents with NSSI experience difficulties in emotion regulation and engage in impulsive self-injury. This behaviour may lead to later suicide attempts and mental health issues. The existence of Negative emotion regulation strategies such as Rumination, Catastrophization, Other-blame and Self -Blame have high suicidal risk and Self-acceptance and Cognitive Reappraisal have a protective role. Considering these potential protective factors as well as risk factors would allow clinicians to develop more suitable early intervention and treatment strategies in adolescent population. Awareness about such behaviour among parents, teachers and other health professionals would help to identify the problems earlier and can motivate adolescents for further assessment and intervention if needed. Further research is necessary to address psychosocial stressors, depression and suicidal ideation contributing to adolescents at the community level.

Implications

The study highlights the importance of understanding the increasing rate of self-injurious behaviour patterns in adolescents and plan interventions for reducing Non-adaptive emotion regulation strategies and increasing self-acceptance and cognitive reappraisal.

REFERENCES

Aggarwal, S., Patton, G., Reavley, N., Sreenivasan, S. A., & Berk, M. (2017). Youth self-harm in low-and middle-income countries: Systematic review of the risk and protective factors. *International journal of social psychiatry*, *63*(4),359-375.

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fifth Edition. American Psychiatric Association; Washington, DC: 2013.

Bakken, N. W. (2021). Risk factors and correlates of self-injurious behavior and suicidal ideation among college students. *Deviant Behavior*, *42*(1), 68-79. https://doi.org/10.1080 /01639625.2019.1651447

Bhasin, S. K., Sharma, R., & Saini, N. K. (2010). Depression, anxiety and stress among adolescent students belonging to affluent families: A school-based study. *The Indian Journal of Pediatrics*, *77*(2), 161-165.

Compas, B. E., Jaser, S. S., Dunbar, J. P., Watson, K. H., Bettis, A. H., Gruhn, M. A., & Williams, E. K. (2013). Coping and emotion regulation from childhood to early adulthood: Points of convergence and divergence. Australian Journal of Psychology, 66(2), 71–81. doi:10.1111/ajpy.12043

Daukantaitė, D., Lundh, L. G., Wangby-Lundh, M., Claréus, B., Bjärehed, J., Zhou, Y., & Liljedahl, S. I. (2021). What happens to young adults who have engaged in self-injurious behavior as adolescents? A 10-year follow-up. *European Child & Adolescent Psychiatry*, *30*(3), 475-492. https://doi.org/10.1007/s00787-020-01533-4

Deci, E. L. & Ryan, R. M. (2008) Hedonia, eudaimonia, and well-being: An Introduction. *Journal of happiness studies*, *9*(1), 1-11

Drum, David J., et al. "New data on the nature of suicidal crises in college students: Shifting the paradigm." *Professional psychology: research and practice* 40.3 (2009): 213.

Esposito, C., Spirito, A., Boergers, J., & Donaldson, D. (2003). Affective, behavioral, and cognitive functioning in adolescents with multiple suicide attempts. *Suicide and Life-Threatening Behavior*, *33*(4), 389-399.

Franklin, J. C., Aaron, R. V., Arthur, M. S., Shorkey, S. P., & Prinstein, M. J. (2012). Nonsuicidal self-injury and diminished pain perception: The role of emotion dysregulation. *Comprehensive psychiatry*, *53*(6), 691-700.

Gandhi, A., Luyckx, K., Maitra, S., & Claes, L. (2016). Non-suicidal self-injury and other self-directed violent behaviors in India: A review of definitions and research. *Asian journal of psychiatry*, *22*, 196-201. doi: http://dx.doi.org/10.1016/j.ajp.2015.09.015

Garnefski, N., & Kraaij, V. (2007). The cognitive emotion regulation questionnaire. *European Journal of Psychological Assessment*, *23*(3), 141-149.

Gratz, K. L. (2003). Risk factors for and functions of deliberate self-harm: An empirical and conceptual review. Clinical Psychology: Science and Practice, 10, 192–205.

Gratz, K. L. (2007). Targeting emotion dysregulation in the treatment of self-injury. *Journal of Clinical Psychology*, *63*(11), 1091-1103.

Gross, J. J., & Thompson, R. A. (2007). Emotion regulation: Conceptual foundations. In J. J. Gross (Ed.), Handbook of emotion regulation (pp. 3–24). New York, NY: Guilford Press.

Gross, J., & John, O. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. Journal of Personality and Social Psychology, 85, 348–362. doi:10.1037/0022-3514.85.2.348

Guertin, T., Lloyd-Richardson, E., Spirito, A., Donaldson, D., & Boergers, J. (2001). Self-mutilative behavior in adolescents who attempt suicide by overdose. *Journal of the American Academy of Child & Adolescent Psychiatry*, *40*(9), 1062-1069.

Hasking, P., Whitlock, J., Voon, D., & Rose, A. (2017). A cognitive-emotional model of NSSI: Using emotion regulation and cognitive processes to explain why people self-injure. *Cognition and Emotion*, *31*(8), 1543-1556.

Jena, S., & Sidhartha, T. (2004). Non-fatal suicidal behaviors in adolescents. *Indian Journal of Psychiatry*, *46*(4), 310.59-469.

Karimi, S., Pirmoradi, M., Ashouri, A., & Aghebati, A. (2021). Relationship of temperament and character traits, emotional regulation and perceived parenting with self-harming behaviors in adolescents. *Iranian Journal of Psychiatry and Clinical Psychology*, *26*(4), 448-463.

Kharsati, N., & Bhola, P. (2015). Patterns of non-suicidal self-injurious behaviours among college students in India. *International Journal of Social Psychiatry*, *61*(1), 39-49.

Klonsky, E. D., May, A. M., & Glenn, C. R. (2013). The relationship between nonsuicidal self-injury and attempted suicide: converging evidence from four samples. *Journal of abnormal psychology*, *122*(1), 231. https://doi.org/10.1037/a0030278.

Klonsky, E. D. (2007). The functions of deliberate self-injury. A review of the evidence. Clinical Psychology Review, 27, 226–239

Klonsky, E. D., Muehlenkamp, J., Lewis, S. P., & Walsh, B. (2011). *Nonsuicidal self-injury* (Vol. 22). Hogrefe Publishing.

Krenke, S. I., & Beyers, W. (2005). Coping trajectories from adolescence to young adulthood: Links to attachment state of mind. *Journal of Research on Adolescence*, 15(4), 561-582. https://doi.org/10.1111/j.1532-7795.2005.00111.x

Miranda, D., Gaudreau, P., Debrosse, R., Morizot, J., & Kirmayer, L. J. (2012). Variations on internalizing psychopathology. In R. MacDonald, G. Kreutz & L. Mitchell (Eds.), Music, health and wellbeing (pp. 513–530). Oxford, England: Oxford University Press.

Muehlenkamp, J. J., Claes, L., Havertape, L., & Plener, P. L. (2012). International prevalence of adolescent non-suicidal self-injury and deliberate self-harm. *Child and adolescent psychiatry and mental health*, *6*(1), 1-9. https://doi.org/10.1186/1753-2000-6-10

Nock, M. K. (2009). Why do people hurt themselves? New insights into the nature and functions of self-injury. *Current directions in psychological science*, *18*(2), 78-83

Ochsner, K. N., Knierim, K., Ludlow, D. H., Hanelin, J., Ramachandran, T., Glover, G., & Mackey, S. C. (2004). Reflecting upon feelings: an fMRI study of neural systems supporting the attribution of emotion to self and other. *Journal of cognitive neuroscience*, *16*(10), 1746-1772.

Penn, J. V., Esposito, C. L., Schaeffer, L. E., Fritz, G. K., & Spirito, A. (2003). Suicide attempts and self-mutilative behavior in a juvenile correctional facility. *Journal of the American Academy of Child & Adolescent Psychiatry*, *42*(7), 762-769.

Pillai, A., Andrews, T., & Patel, V. (2009). Violence, psychological distress and the risk of suicidal behaviour in young people in India. *International journal of epidemiology*, *38*(2), 459-469.

Plener, P. L., Schumacher, T. S., Munz, L. M., & Groschwitz, R. C. (2015). The longitudinal course of non-suicidal self-injury and deliberate self-harm: a systematic review of the literature. *Borderline personality disorder and emotion dysregulation*, *2*(1), 1-11.

Rangeeth, B. N., Moses, J., & Reddy, N. V. (2011). Self-injurious behaviour and foreign body entrapment in the root canal of a mandibular lateral incisor. *Journal of Indian Society of Pedodontics and Preventive Dentistry*, *29*(6), 95. https://www.jisppd.com/text.rsp?2011/29/6/95/90754

Robinson, K., Garisch, J. A., Kingi, T., Brocklesby, M., O'Connell, A., Langlands, R. L., & Wilson, M. S. (2019). Reciprocal risk: The longitudinal relationship between emotion regulation and non-suicidal self-injury in adolescents. *Journal of abnormal child psychology*, *47*(2), 325-332. doi:10.1007/s10802-018-0450-6

Simon, T. R., Swann, A. C., Powell, K. E., Potter, L. B., Kresnow, M. J., & O'Carroll, P. W. (2001). Characteristics of impulsive suicide attempts and attempters. *Suicide and Life-Threatening Behavior*, *32* (1), 49-59.

Singhal M, Manjula M, Vijay Sagar KJ. Development of a school-based program for adolescents at-risk for depression in India: Results from a pilot study. Asian J Psychiatry 2014; 10:56-61. 40.

Swannell, S. V., Martin, G. E., Page, A., Hasking, P., & St John, N. J. (2014). Prevalence of nonsuicidal self-injury in nonclinical samples: Systematic review, meta-analysis and meta-regression. *Suicide and Life-Threatening Behavior*, *44*(3), 273-303.

Tang, Y., Wan, Y., Xu, S., Zhang, S., Hao, J., & Tao, F. (2021). Nonlinear relationship between sleep duration and non-suicidal self-injurious behaviour among Chinese adolescents. *BMC psychiatry*, *21*(1), 1-14. https://doi.org/10.1186/s12888-021-03539-x

Thippaiah, S. M, Nanj appa, M. S, Gude, J. G., Voyiaziakis, E., Patwa, S., Birur, B., & Pandurangi, A. (2021). Non-suicidal self-injury in developing countries: A review *International journal of social psychiatry*, *67*(5),472-482. doi:10.1177/002076 4020943627

Thompson, R. A. (1994). Emotion regulation: A theme in search of a definition. Monographs of the Society for Research in Child Development, 59, 25–52.

Wolff, J. C., Thompson, E., Thomas, S. A., Nesi, J., Bettis, A. H., Ransford, B., & Liu, R. T. (2019). Emotion dysregulation and non-suicidal self-injury: A systematic review and meta-analysis. *European Psychiatry*, *59*, 25-36.

You, J., Ren, Y., Zhang, X., Wu, Z., Xu, S., & Lin, M. P. (2018). Emotional dysregulation and nonsuicidal self-injury: A meta-analytic review.733–748

Acknowledgement

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: George, J. & Jaya, A T (2023). The Pattern of Non-Suicidal Behaviour and Mediating Role of Emotion Regulation Strategies in Adolescence. *International Journal of Indian Psychology*, *11(1)*, 1089-1097. DIP:18.01.111.20231101, DOI:10.25215/1101.111