Non-Suicidal Self-Injuries in Adolescents: The Role of Satisfaction with Family Life

Haydee Mercedes Aguilar-Armas1*
Velia Graciela Vera-Calmet1
Lucy Angélica Yglesias Alva2
Monica Elisa Meneses-La-Riva1
Susana Edita Paredes Diaz1

Virginia Rosemary Guerrero Carranza1

1Division of Research, Universidad César Vallejo, Trujillo, Perú
2Division of Research, Universidad Nacional de Trujillo, Perú.
*Corresponding Author

DOI: https://doi.org/10.36941/ajis-2024-0055

Abstract

The family plays a determining role in the development of the emotional well-being of its members. Self-injury is a phenomenon that has been growing in the world statistics in adolescents, so there is an enormous concern for the presence of risk factors, both individual and psychosocial. The relationship between satisfaction with family life and the emergent behavior of non-suicidal self-injury was established. The study had a quantitative, correlational, non-experimental, cross-sectional design. The population consisted of 200 high school students. The results indicate that a chaotic and unsatisfactory family environment may be a predisposing factor for the presence of emergent non-suicidal self-injurious behavior. Adolescents present self-injurious practices for various reasons: feelings of loneliness, insecurity behaviors, inadequate response to adversity. In addition, self-determination theory offers a plausible explanation for the relationship found in this research. The satisfaction of basic psychological needs, such as the need for competence, relatedness, and autonomy, can be achieved through a healthy and supportive family environment, which in turn can improve the emotional well-being of adolescents and reduce the risk of self-injurious behaviors.

Keywords: Non-suicidal self-injury, Family, Satisfaction with family life, Emergent behavior

1. Introduction

The family is an entity made up of members who carry out activities aimed at developing personal aspects seeking that human beings express themselves freely in relation to their emotions, values and beliefs, having as its main purpose the achievement of happiness and maturity (Clavijo Portieles, 2011) confirms that there is no more important bond than that which provides well-being and security throughout life within the family (Rodríguez Mateo et al., 2018).
Family satisfaction is relevant for the family to maintain family cohesion in the long term, allowing it to fulfill its role as a social unit, as a healthy model for its descendants and environment (Pérez Rodríguez & Rodríguez-Mateo, 2014); (Vala & Benedicta, 2013); (Castro Silva et al., 2016).

There are different types of families, oriented to the satisfaction of basic needs, to a greater or lesser degree, these gratifications depend on the family characteristics; the rules are formed by norms, values and principles, these will allow to comply or not with the established guidelines. It should be noted that the highest levels of family satisfaction are characteristic of nuclear and extended families, followed by single-parent and binuclear families (Roman Sanchez et al., 2009).

The problems that arise within the family are related to the behavior and behaviors of the children. The conflicts that arise in the family nucleus are linked to different problems in the lives of adolescents (De Souza & Crepaldi, 2019); (Páez & Pérez, 2020).

As the main basis for development, parents play a determining role in the psychological well-being of their children (Carrasco Muñoz et al., 2020), fostering bonds of filiation that in the future nurture healthy affective relationships with other people (Rodríguez Mateo et al., 2018). The bonds established between parents and children are fundamental to protect or increase the risk of generating problems linked to the regulation of emotional expression, being a reflection of the family emotional climate (Fahrer et al., 2022).

For the World Health Organization (World Health Organization, 2023), adolescence is a vulnerable stage in the face of risk conditions that occur in the environment. Recent data show that half of the emotional difficulties in adult life begin during adolescence (Loredo Aguilar, 2019).

Emotional changes at this stage produce insecurity when adapting to new environmental conditions, as it implies a difficult effort in psychic structuring to deal with their future (Lillo Espinosa, 2004); (Mollà et al., 2015) (Gallegos-Santos et al., 2018). This continuum of changes to elaborate their internal reality constitutes a primordial pillar in the formation of their identity (Manca, 2011).

Making decisions without meditating is typical of adolescents, this can be a resource to face difficulties or a risk that leads them to self-destructive behaviors (Rivera & Cahuana, 2016); (Jácobo Valdivia et al., 2020) (Ministerio de Salud, 2017).

In Colombia, a study found a sample that 31% of the population presents some type of family disturbance, detecting indicators that predispose to an increase in disturbed emotional expressions (Serna-Arbelaez et al., 2020), the family group shapes and structures the adolescent’s behavior.

Families that transmit positive emotions influence the development of happiness and other feelings of well-being; momentary reactions that are typically experienced when something important occurs for the person, contributing to the mental health of the adolescent (Contreras & Esguerra, 2006) (Seligman et al., 2005). Despite the fact that the young person establishes relationships with peer groups, the affective bonds with his or her parents will continue to be his or her main source of attachment and emotional support (Luna Bernal et al., 2011).

Just as the family generates positive bonds, there is a high prevalence of suicide attempts in adolescents associated with various factors, such as depression, anxiety, psychoactive substance use, behavioral problems and family violence (Mayer Villa et al., 2016). One of the most frequent forms are self-inflicted and self-injurious behaviors in adolescents, which generate non-suicidal bodily harm with deliberate actions that can become recurrent, socially rejected due to their chronicity (Nock et al., 2006) (Ulloa Flores et al., 2013) (Muehlenkamp et al., 2012). This situation is generated due to emotional discomfort, reducing the stress and tension they experience, although their goal is not to end their life, but presents behaviors of cutting, burning, and self-harm among others (Cabrera De la Cruz, 2021); (Klonsky, 2007) (Galarza et al., 2018).

Countries such as Australia indicate that 8.1% of the total population has self-injured at some stage of their lives, showing the ravages of an adolescence full of unresolved emotions (Ulloa Flores et al., 2013). In a prevalence study, (Muehlenkamp et al., 2012) found 18% of non-suicidal injuries in adolescents. (Calvete et al., 2015) show that adolescents report having performed non-suicidal physical self-injury in the last year; 32% presented severe self-injury (Gámez-Guadix et al., 2022).
The brain structures involved in the cognitive and emotional process of pain experienced by people who self-injure are altered making the perception unpleasant and distorted (Mendoza & Pellicer, 2002); (Castro Silva et al., 2017) (Castro Silva et al., 2016). Adolescents who choose to self-injure produce a discharge of opioids, which momentarily grant them states of calm and lucidity, thus generating an addictive cycle that leads them to repeat the behavior (Albores-Gallo et al., 2014) (Reinoso-Brito & Quito-Calle, 2019).

2. Methodology

A non-experimental and cross-sectional design was used to establish the relationship between satisfaction with family life and the emergent behavior of non-suicidal self-injury (Hernández-Sampieri, R. Mendoza, 2019); (Keele et al., 2019). The sample was composed of 200 high school students, probabilistically selected from state educational institutions located in Trujillo, Peru. The margin of error was 5% with a confidence level of 95%. The sample was composed of 43.5% (87) males and 56.5% (113) females, and 57.5% (115) aged fourteen years or younger and 42.5% (85) aged fifteen years or older.

3. Instruments

3.1 Scale of Satisfaction with family life:

The Scale of Satisfaction with Family Life (ESVF, from Spanish initials) is based on the theoretical underpinning of Diener, 2009, and Luna & Laca, 2014, and is used to assess the level of satisfaction an individual has in his or her family life through his or her own unique set of criteria. The ESVF is composed of five items on a Likert-type scale ranging from "1 = strongly disagree" to "7 = strongly agree".

3.2 Emergent Behavior Scale of non-suicidal self-injuries:

The 25-item scale was used, scored on a three-point Likert scale (0: not relevant, 1: somewhat relevant, 2: very relevant) distributed in seven dimensions: Self-regulation, Suicide avoidance, Manifestation of distress, Blunting, Search for sensation/strength, Self-control, and Revenge. This scale evaluates the different motivations or functions to which people refer to perform non-suicidal self-injuries.

For both scales, confirmatory factor analysis was used through the following indexes: Adjusted Goodness of Fit Index (AGFI), Normed Fit Index (NFI), Relative Fit Index (RFI), Comparative Fit Index (CFI), Parsimony Normed Fit Index (PNFI) and (RMSEA) square root of the error of approximation (Brown, 2015). To evaluate the reliability of the instruments, the omega coefficient was used (Ventura-León & Caycho-Rodríguez, 2017).

In the correlation analysis, considering the lack of bivariate normality of the variables, Spearman’s rho correlations were calculated, as well as the magnitude of the effect size of the correlation, based on the cut-off points: 0.5 large, 0.3 medium and 0.1 small (Spearman, 1904); (Cohen, 1988). Ultimately, the Mann-Whitney U test was used for the purpose of determining mean rank difference between genders and age groups, and determining the effect size corresponding to these differences using the superiority probability, which categorizes the effect size into no effect, small, medium and large. (Ventura-León & Caycho-Rodríguez, 2017) In addition, the boxplot was used to visualize and compare these aspects of interest. Data processing was automated using RStudio and IBM SPSS Statistics 28 programs, including the AMOS version 23 extension.

The results of the application of confirmatory factor analysis (CFA) with the unweighted least squares method to assess the validity of the factor structure of the scales of satisfaction with family life and self-injury indicated that the one-factor model of satisfaction with life reported the following
indicators (RMR = .08, AGFI=.99; RFI = .99; NFI = .99; PNFI =.50, factor loadings between .61 and .76); whereas for the six-factor model of self-injury, the following results were obtained (RMR = .035, AGFI=.95; RFI = .93; NFI = .94; PNFI =.79). The AFC results indicated a good fit in both cases.

The Mc Donald's omega reliability coefficients of the Satisfaction with family life scale had a value of 0.84; and the one corresponding to the Self-injury scale reported a value of .90 indicating the presence of internal consistency in both cases.

During the research process, ethical considerations such as informed consent and informed parental consent were applied to ensure the confidentiality of the data, being approved and reviewed by the Ethics Committee of the Universidad César Vallejo.

4. Results

4.1 Correlational analysis

Table 1: Correlation between satisfaction with family life and emergent non-suicidal self-injury behavior

<table>
<thead>
<tr>
<th>Variables</th>
<th>Rho</th>
<th>Effect size of rho</th>
<th>Test power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-injurious self-injuries</td>
<td>-0.32**</td>
<td>.32</td>
<td>.914</td>
</tr>
<tr>
<td>Intrapersonal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction with life in family</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-regulation</td>
<td>-0.37**</td>
<td>.37</td>
<td>.985</td>
</tr>
<tr>
<td>Suicide avoidance</td>
<td>-0.33**</td>
<td>.33</td>
<td>.936</td>
</tr>
<tr>
<td>Manifestation of distress</td>
<td>-0.21**</td>
<td>.21</td>
<td>.510</td>
</tr>
<tr>
<td>Blunting</td>
<td>-0.30**</td>
<td>.30</td>
<td>.854</td>
</tr>
<tr>
<td>Interpersonal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Search for sensation/strength</td>
<td>-0.19**</td>
<td>.19</td>
<td>.481</td>
</tr>
<tr>
<td>Self-control</td>
<td>-0.03</td>
<td>.03</td>
<td>.</td>
</tr>
<tr>
<td>Revenge</td>
<td>-0.34**</td>
<td>.34</td>
<td>.954</td>
</tr>
</tbody>
</table>

Note: rho: Spearman’s rho correlation Coefficient

**p<.01

Evidence was found of an inverse correlation between satisfaction with family life and non-injurious self-injury, both at the general level and with the intrapersonal dimensions: self-regulation, suicide avoidance and blunting, and with the interpersonal dimension indicator: revenge. Correlations (p<.01) were significantly greater than .30, presented effect sizes of medium magnitude. Test powers greater than 85%, which indicates the probability of detecting the real presence of real relationship, a 95% confidence level was assumed. The dimensions: manifestation of distress and Search for sensation/strength presented a small magnitude effect size with test power less than .80 (Table 1).
Note: The Mann-Whitney U test was applied in the comparison of averages, since the normality condition was not met. a: Value inside the box corresponds to the median; PS: Effect size of the differences. Rm: Mean rank in men; R2: Average range in women.

**Figure 1:** Comparison of average ranges by gender of the dimensions of self-injuries and satisfaction with family life.

Figure 1 presents the boxplots for each of the variables under study, showing the median value, as well as the probability of superiority as effect size and the results of the Mann-Whitney U test for comparison of average ranges; showing that in non-injurious self-injury at a general level and in the dimensions self-regulation, suicidal avoidance, manifestation of distress, blunting, self-control and revenge, women outperform men on average; whereas in the dimension search for sensation/strength, as well as in satisfaction with life, men outperform women on average.
Figure 2 shows the boxplot of the variables according to age groups, indicating in each case the median value, as well as the results of the Mann-Whitney U test, showing that at the general level in non-injurious self-injuries and in all dimensions, adolescents aged 15 to 18 years outperformed those aged 11 to 14 years on average; whereas, in life satisfaction, those aged 11 to 14 years outperformed those aged 14 to 18 years.

5. Discussion

The aim of the present study was to establish whether satisfaction with family life is a factor related to non-suicidal self-injuries in adolescents. For this purpose, a sample of 200 adolescents was recruited.

The results of the study indicate that there is an inverse relationship between satisfaction with family life and self-injurious behaviors and in the dimensions, self-regulation, suicide avoidance, blunting and revenge with adequate effect size and test power; in agreement, Cohen, 1988, states that it is important in correlational studies to account for the effect size that indicates the magnitude of a relationship, and the statistical power that responds to the degree of validity that the research findings have as an ethical support. The above findings are consistent with previous research by Li et al., 2021, who suggest that having a positive and supportive family environment may function as a protective factor in preventing the tendency of adolescents to exhibit these types of behaviors. Furthermore, these results are also consistent with self-determination theory (Ryan & Deci, 2000), which suggests that the satisfaction of basic psychological needs in the family plays a predominant role, being an important factor in the prevention of self-injurious behaviors.

It is important to consider that, although family life may be related to non-suicidal self-injury in adolescents, it is not the only influencing factor, as evidenced in the present research with the average magnitude of the effect size in the correlation. Among other factors, they refer that, depression, anxiety and stress are also significantly related to the presence of non-suicidal self-injury,
according to research conducted by Bresin & Schoenleber, 2015. Therefore, it is essential to address multiple risk factors in the prevention and treatment of non-suicidal self-injuries.

It was identified in this study that, at a general level and in six dimensions of self-injurious behavior, adolescent females presented a higher average rank and a probability of superiority with respect to males, with values ranging from .39 to .49, although this criterion was not detected as an important effect; a greater tendency of self-injurious behaviors was observed in female adolescents. These findings would coincide with previous research that found that females present a higher prevalence to execute self-injurious behaviors (Muehlenkamp et al., 2012); (Hawton et al., 2012) (Fleta Zaragozano, 2017). Regarding age, it was observed that adolescents aged 14 years or younger presented a lower tendency to this type of behaviors and probably one of the influencing factors was that they reported a tendency to present greater satisfaction with life than those older than 14 years.

The primary objective of the family is to promote the full growth of its members, as well as a healthy physical condition, where each participant expresses satisfaction with their environment and the functions established in it, such as adequacy, freedom of expression, emotional development, positive affections and personal resources; aspects supported by Diener when arguing that the good or bad cognitive evaluations about their life, start from their own experiences (Serna-Arbelaez et al., 2020); (Alfaro et al., 2016). Families that present some type of dysfunctionality are characterized by unempathetic, hostile, critical, punitive parental behaviors, limiting attachment in their children (Fahrer et al., 2022) (Perquier et al., 2021) bringing as a consequence physical and emotional pain, generating the feeling that pain releases anguish and uneasiness, using self-injury as a way to channel and feel power over oneself (Fleta Zaragozano, 2017). Bronfenbrenner explains that the family system structures and directly influences the development of the human being from the moment of conception. In addition, the ecological theory mentions that the mesosystem directly affects children through the influence of the environment such as school and society (Minuchin, 2004).

The family plays a fundamental role in the increase of emerging behaviors and the risk of suicidal behaviors. The emotional health of the adolescent is directly related to an adequate family climate; frequent conflicts within this environment are risk factors in adolescent development, increasing the presence of family disagreements (Serna-Arbelaez et al., 2020). The family acts as a source of constant and dynamic norms and limits that regulate its actions in society (Minuchin, 1986, Andolfi, 1993; Musitu et al., 1994, Rodrigo and Palacios, 1998). The systemic approach explains that the family should be understood as a group with special and unique characteristics that interact in a complex and dynamic way (Minuchin, 2004).

Manifestations of anxiety and distress are the most frequent behaviors that occur at the intrapersonal level, damaging family relationships, as well as their academic activities (Amezquita Medina et al., 2008); (Moreno et al., 2014). Mental health difficulties in family members affect social, emotional and psychological interactions, producing suicidal behaviors. The interaction between parents and children strengthens the development of the psychic structure that helps to avoid the externalizing behavior of suicide (Ribeiro et al., 2016); (Kessler et al., 2015); (Mzadi et al., 2022).

An inadequately expressed emotion shows how the interaction between parents and children is altered, a situation that can be transmitted from generation to generation. A negative bond within the family can generate both internalizing and externalizing symptoms in the children, who manifest indifference, low motivation, detachment, within the family group (Fahrer et al., 2022). There are imperceptible signs of distress, such as suicidal thoughts and suicidal ideation, which should not be overlooked (Raffagnato et al., 2022); (De Berardis et al., 2020).

Adolescents who present self-injurious behaviors manifest this behavior as a form of release of distressing emotional states (Fleta Zaragozano, 2017). These young people, feeling less emotional and social support, seek to distract negative emotions by generating situations of personal risk, due to the internal emptiness they experience, normalizing this potentially harmful behavior (Duggan & Whitlock, 2012). Adolescents who present self-injurious behaviors seek spaces where their peers motivate and reinforce this behavior, as a form of coping to regulate their self-punishment, calling the attention of their environment (Gámez-Guadix et al., 2022); (Mollà et al., 2015).
Self-injury avoids negative emotions, is a form of escape to avoid painful symptoms or memories of traumatic internal experiences in the family and painful bodily sensations (Klonsky, 2007) (Ospina Gutiérrez et al., 2019) (Shae et al., 2022). The participation of adolescents in the management of their personal resources should prevail, thus seeking the expression of socially acceptable behaviors. The family must accompany the adolescent in the construction of these new skills that allow for adequate self-control, which implies that they must receive emotional support from the family and society (Queiroz, 2021).

The act of performing a self-injury is predisposed by a feeling of tension and anxiety, which when executed allows relief (Rangel-Navia et al., 2016). These behaviors seek to covertly control the attention of their immediate environment to reduce stressful events, such as loneliness, isolation and poor interaction. In contrast, an adequate connection with their parents is a protective factor for self-injurious behaviors (Gámez-Guadix et al., 2022).

6. Conclusions

In conclusion, the present study provides empirical evidence that supports the inverse relationship between satisfaction with family life and non-suicidal self-injuries in adolescents in Trujillo. These results are consistent with previous research in this field and suggest that a positive and supportive family environment may be a protective factor against the tendency to present this type of behavior. Similarly, a tendency to present self-injurious behaviors was observed more frequently in female adolescents than in males, as well as in adolescents between 15 and 18 years of age compared to those between 11 and 14 years of age.

In addition, self-determination theory offers a plausible explanation for the relationship found in this research. The satisfaction of basic psychological needs, such as the need for competence, relatedness, and autonomy, can be achieved through a healthy and supportive family environment, which in turn can improve the emotional well-being of adolescents and reduce the risk of self-injurious behaviors.

7. Recommendations

It is suggested that the results of this research be considered by mental health professionals, educators, and parents to prevent nonsuicidal self-injuries in adolescents. It is important to foster a positive and supportive family environment that meets the basic psychological needs of adolescents and, therefore, promotes their emotional well-being. In addition, it is recommended to continue investigating this relationship in different contexts to identify more effective strategies for the prevention and treatment of self-injurious behaviors in adolescents. Where programs could be implemented to strengthen the management of interactions and relationships within the family nucleus and to reinforce optimal communication and values.

References


