



# ASSOCIATION BETWEEN SUICIDE AND SELF-INJURY BEHAVIORS, AND THE NATURE OF TRAUMATIC EXPERIENCES IN 908 COLOMBIAN PATIENTS WITH EATING DISORDERS



Maritza Rodríguez Guarín, Juanita Gempeler Rueda, Nelcy Rodríguez Malagón, Daniel Garzón.  
Equilibrio Outpatient Program, Javeriana University, Faculty of Medicine, Bogotá, Colombia

## BACKGROUND

- Suicide Attempt (SA) and Self-Injury Non Suicidal Behaviors (SINSB), have been described as frequent in ED patients. They have been associated with ED subtype, depression, substance abuse, severity of ED symptoms and sexual abuse.
- SA is one of the predictors of death by suicide.
- SINSB are repetitive and intentionally self-harm behaviors, done without suicidal propose, as cutting, burning, scratching, hitting, or picking the skin in a compulsive way until bleeding and/or experiencing pain.
- Early traumatic experiences as child abuse (sexual, physical or emotional), has been associated with SINSB. However, in countries with high indices of social violence is important to consider other traumatic events.
- Other life threatening experiences as assaults, kidnapping, extortions to the patient, or homicide or suicide of a family member must be explored.

## OBJECTIVES

- To explore the relationship between the nature of traumatic experiences (such as sexual abuse, physical abuse, life threatening experiences, extortion and/or kidnapping, homicide or suicide in a family member, induced abortions, and teasing about the physical appearance), and SA and SINSB, in a sample of 908 Colombian ED patients.
- Additionally, the association between SA and SINSB antecedents was studied.

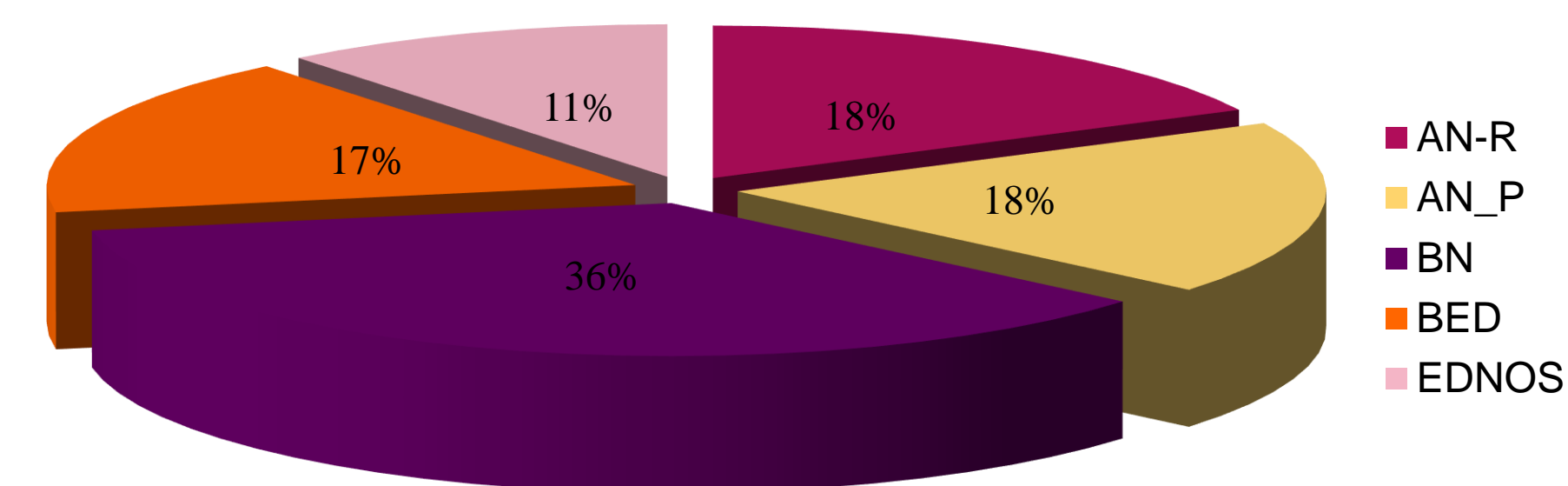
## MATERIALS AND METHODS

**Study Sample:** 908 patients of both genders attending Equilibrio's outpatient program for ED treatment in Bogotá were included.  
**Variables:** The background of SA and SINSB was explored systematically by direct and structured questions to the patient, and then they were validated with the family. Socio demographic and clinical variables as well as traumatic experiences were studied.  
**Statistical Analysis:** Simple frequencies were calculated and a bivariate analysis between SA, SINSB and the other study variables was done. Finally for the multivariate analysis, two models of association were constructed using the variables with clinical and statistical significance.

## RESULTS

Forty-three men (4.7%) and 865 women (95.3%), with an average age of 20.6± 6.9 years were evaluated. Distribution by ED subtype is seen in Figure 1.

Figure 1. ED Subtype in 908 patients



One hundred and eighteen patients (13%) reported at least one SA along their lives, and 218 (24%) presented SINSB as cutting, hitting, burning or picking themselves, pulling their nails or scoring their skin. (Figure 2). SA as well as SINSB were more frequent in bulimic patients. See Figure 3.

Figure 3. Type of Self Injury Behavior

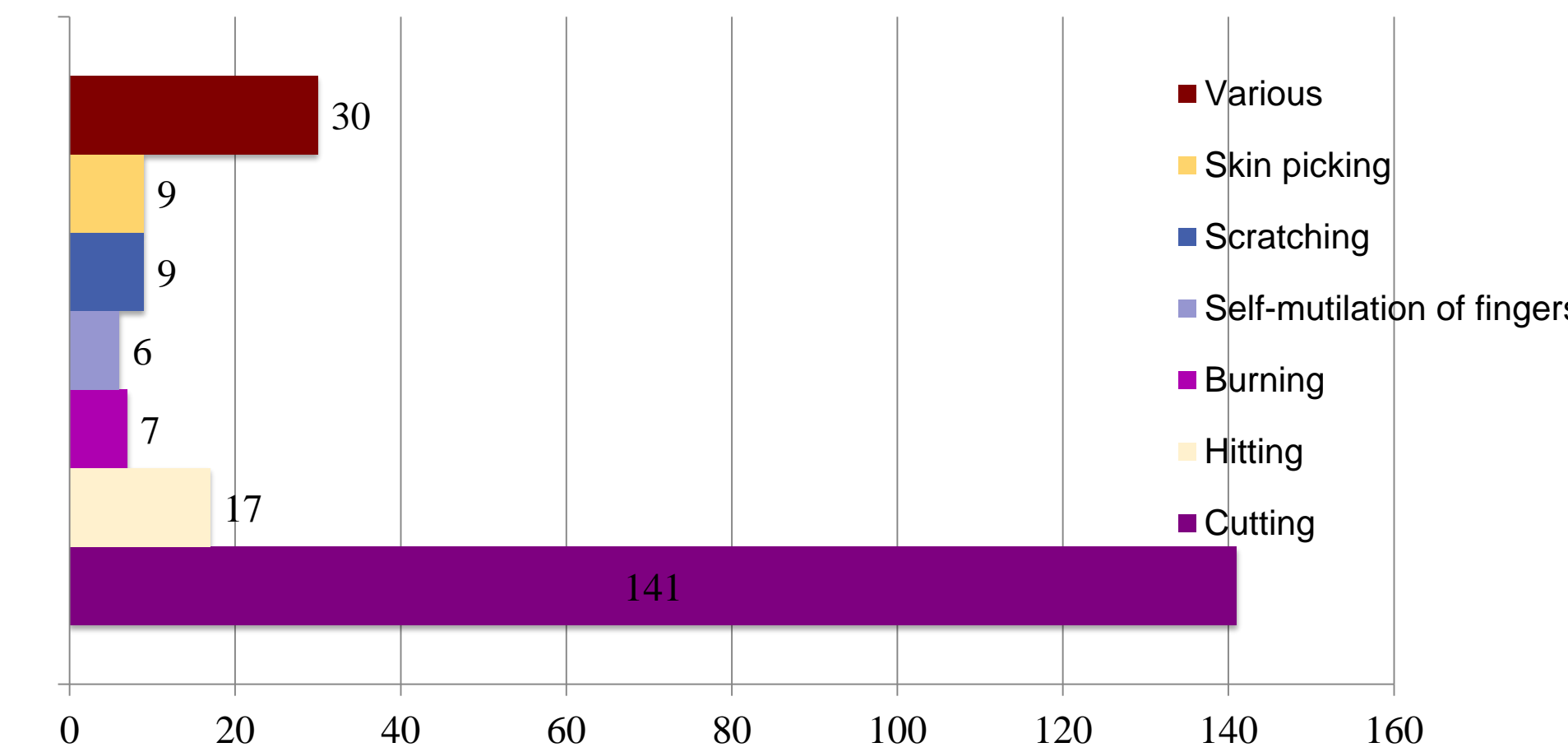
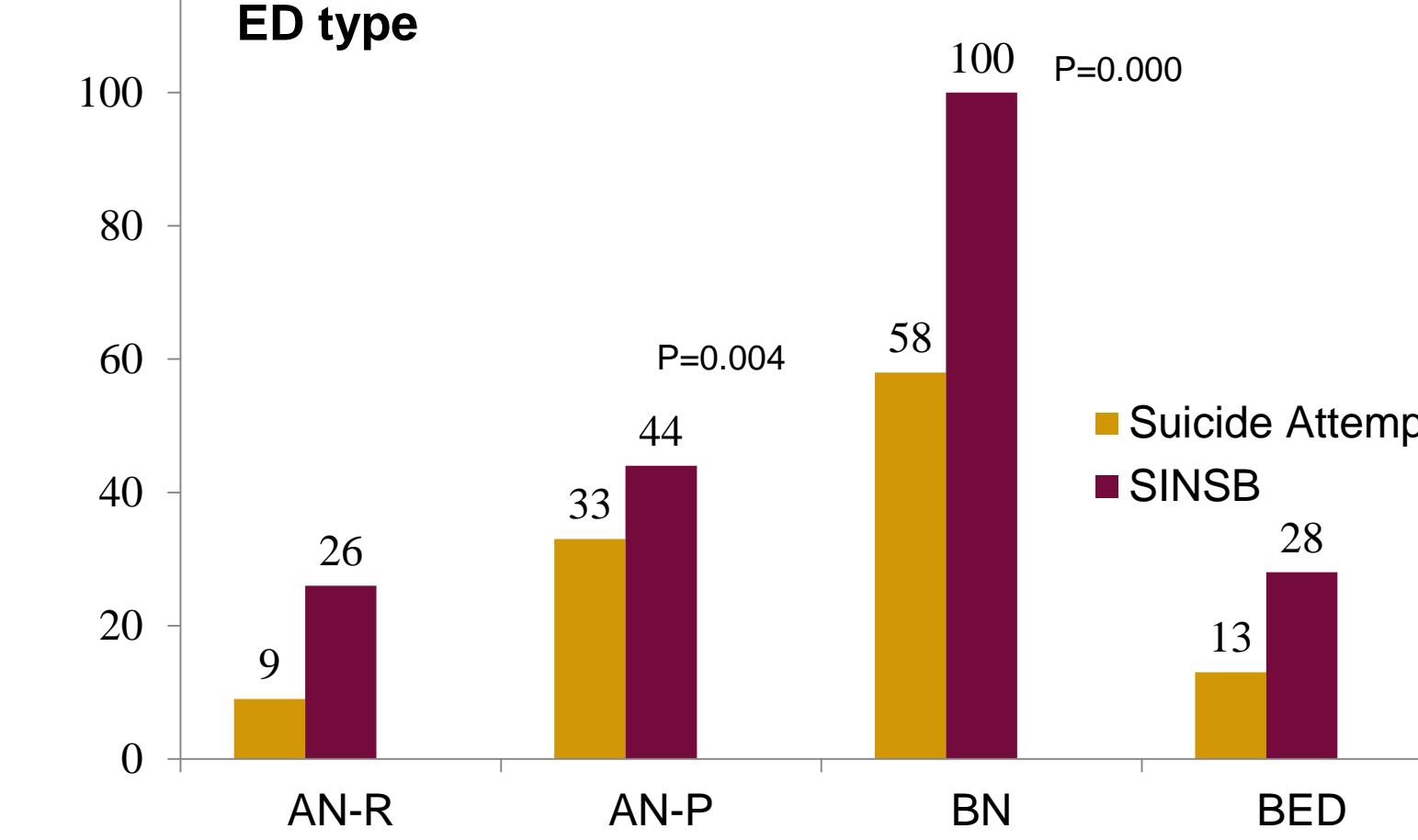


Figure 3. Suicide Attempts and Self-Injury by ED type



Sexual abuse and other traumatic events such as physical abuse and life threatening of patient or family members were found to precede SA and SINSB. SA was associated as well with other traumatic events as self induced abortions, extortion and kidnap of family members or the patient itself, suicide or homicide in family members. The SINSB were also associated with past experiences of being teased for the physical appearance. (Table 1).

Table 1. Bivariate Analysis between Nature of Traumatic events and Suicide or Self injury behaviors in 908 patients with ED.

Nature of Traumatic Event	Total	With Suicide Attempt N=118 (%)	OR (CI 95%)	With SINSB N=218 (%)	OR (CI 95%)
<b>SEXUAL ABUSE</b>	136	34 (28.8)	2.7 (1.7-4.2)	64 (29.3)	3.5 (2.4-4.2)
<b>OTHER TRAUMATIC EXPERIENCES</b>	216	45 (38.1)	2.2 (1.4-3.3)	68 (31.2)	1.6 (1.1-2.3)
Physical Abuse	75	17 (14.4)	2.1 (1.2-3.7)	26 (11.9)	1.7 (1.1-2.9)
Kidnapping/Extortion	59	16 (13.5)	2.7 (1.5-4.9)		
Life Threatening Experience	129	28 (23.7)	2.1 (1.3-3.3)	44 (20.1)	1.8 (1.2-2.6)
Homicide of a relative	23	7 (7.9)	3 (1.2-7.3)		
Suicide of a relative	28	9 (7.6)	3.3 (1.5-7.4)		
Induced Abortion	34	11 (9.3)	1.2 (0.6-2.3)		
Teasing about physical appearance	406	50 (42.3)		84 (38.5)	

Table 2. Multivariate Model of Suicide Attempt

Suicide Attempt	OR	Std. Error	p	CI 95%
SINSB	5.46	1.17	0.000	3.58-8.31
Suicide of a relative	3.24	1.48	0.010	1.32-7.93
Sexual Abuse	1.74	0.43	0.025	1.07-2.84

SINSB: Self injury Non suicidal Behavior; OR: Odds Ratio; Std. Err: Standard error; CI: Confidence Interval

Table 3. Multivariate model of Self injury behaviors

Self Injury non suicidal behavior	OR	Std. Error	p	CI 95%
Suicide Attempt	5.31	1.13	0.000	3.49-8.08
Sexual Abuse	2.75	0.58	0.000	1.81-4.18
PTSD	1.65	0.38	0.033	1.04-2.62

PTSD: Post traumatic Stress Disorder; OR: Odds Ratio; Std. Err: Standard error; CI: Confidence Interval

The logistic regression model for SA, showed that those patients with self harm behaviors have 5 times more risk for SI, adjusting for the antecedent of suicide of a family member and have been sexually abused.

The patients with sexual abuse history have 2.7 more risk of self harm behaviors, and 1.6 more risk of PTSD. (Tables 2 and 3)

## CONCLUSIONS

- SA and SINSB are significantly more frequent in patients with bulimic symptoms. Both type of behaviors are associated with traumatic events as sexual abuse, physical abuse and life-threatening experiences of the patient or a family member.
- SA and SINSB are correlated. The risk of SI was 5.4 times higher in patients with self harm and vice versa.
- The risk of sexual abuse was 2.7 times higher in patients with SINSB and 1.7 times higher in which have SA.
- The nature of other traumatic events different from sexual abuse should be explored due to its frequent presence as antecedent of ED symptoms.
- The presence of self-harm behaviors should warn about the presence of a PTSD, and the antecedent of traumatic experiences, that should be worked in therapy.

## REFERENCES

- Peebles, R., Wilson, J., M.D., Lock, J., "Self-Injury in Adolescents With Eating Disorders: Correlates and Provider Bias" (2011). *J. Adolesc. Health*, March; 48(3): 310-313.
- Guillaume S., Jausseant I., Olié E., Genty C., Bringer J., et al. (2011). "Characteristics of Suicide Attempts in Anorexia and Bulimia Nervosa: A Case-Control Study". Open-access article.
- Franko DL, Keel PK, Dorner DJ, Blais MA, Delinsky SS, Eddy KT, Charat V, Renn R, Herzog DB. (2004). "What predicts suicide attempts in women with eating disorders?" *Psychol Med*. Jul;34(5):843-53.
- Svirko E, Hawton K. (2007). "Self-injurious behavior and eating disorders: the extent and nature of the association". *Suicide Life Threat Behav* Aug;37(4):409-21.
- Brodsky, B., & Stanley, B. (2008). "Adverse childhood experiences and suicidal behavior". *Psychiatric Clinics of North America*; 31, 223-235.
- Wondolich, S., Crosby, R., Mitchell, Thompson, KM, JE, Redlin, J., DeMath, G., Smyth, J., and Haseltine, B. (2001). "Eating disturbance and sexual trauma in childhood and adulthood". *International Journal of Eating Disorders*, 30, 401-412.
- Shaffer A, Yates TM, Egeland BR. (2009). "The relation of emotional maltreatment to early adolescent competence: Development process in a prospective study". *Child Abuse & Neglect*. Vol 33, Issue 1:36-44.