

D. Talevi¹, F. Pacitti¹, S. Parnanzone¹,
C. Crescini¹, A. Lucaselli¹, M. Costa¹,
R. Rossi²

¹ Department of Biotechnological and Applied
Clinical Sciences (DISCAB), University of
L'Aquila, Italy; ² PhD programme, University of
Rome Tor Vergata, Italy

The Karolinska Interpersonal Violence Scale, Italian version

Summary

The Karolinska Interpersonal Violence Scale (KIVS) is a semi-structured interview constructed to measure both the experiences of violence perpetration and victimization in childhood and adulthood. The original version was developed in Sweden in a study involving suicide attempters and healthy volunteers. We developed the Italian version of this innovative scale and administered it to one clinical and to one general sample.

Key words

Interpersonal violence • Karolinska Interpersonal Violence Scale • Violence assessment

Introduction

Over the XX and XXI centuries, interpersonal violence increased as a cause of morbidity and mortality and nowadays it is a major public health problem worldwide^{1,2}. The dramatic reduction of the incidence and mortality from infectious diseases and the simultaneous growth of homicide and suicide in the rankings of causes of death contributed to this increasing recognition³. Death is the most evident outcome, but only the tip of the iceberg of the burden arising from violence. The non-fatal consequences are by far the greatest part of the health burden and include a wide range of unseen consequences, like mental health problems and risky behaviors⁴. Evidence supports the notion that there is a variety of psychological health problems also among perpetrators⁵.

According to this perspective, interpersonal violence consists in relational trauma, which is more prone to cause mental distress than natural disasters because it is perceived as a threat to attachment relationships and to our fundamental sense of trust^{6,7}. Moreover, it is typically experienced as intentional rather than as “an accident of nature”. In fact, the meaning a person assigns to a stressful event is significant in the development of psychological consequences: the meaningless trauma tends to be more disruptive than a trauma with an assigned meaning.

Despite the strong impact of violence on health and social functioning, only few instruments have been developed to measure violent experiences⁸. In 2010, Jokinen and colleagues proposed the innovative Karolinska Interpersonal Violence Scale (KIVS), a semi-structured interview specific for interpersonal violence⁹. It is composed of 4 subscales investigating exposition to violence or the expression of violent behavior in childhood and adulthood. Within each subscale a score from 0 to 5 is assigned. It has been validated with some questionnaires measuring aggression and acts of violence and it showed good psychometric properties. It has been used in several suicide research studies¹⁰⁻¹⁵ and in observational studies within clinical samples¹⁶⁻¹⁹. The Italian version of the KIVS is herewith presented. A brief description of the instrument is reported. The procedures followed for translation and adaptations of the interview, as well as the training of researchers and the results on its reproducibility are illustrated.

© Copyright by Pacini Editore Srl



OPEN ACCESS

Received: March 01, 2019

Accepted: March 22, 2019

Correspondence

Dalila Talevi
Department of Biotechnological and Applied
Clinical Sciences (DISCAB), University of
L'Aquila, via G. di Vincenzo 16/B, 67100
L'Aquila, Italy • Tel. +39 340 0628 883;
+39 0862 368 249 Fax +39 0862 368 271
• E-mail: dalila.talevi@gmail.com

Description of the Karolinska Interpersonal Violence Scale

The KIVS is specific for interpersonal violence and, compared to other scales, distinguishes aggressive acts from aggressive thoughts or feelings. It was developed by Swedish researchers from the Karolinska Institutet. In their validation study⁹, the Buss-Durkee Hostility Inventory, Hostility and Direction of Hostility Questionnaire (“Urge to act out hostility” subscale) and the Early Experiences Questionnaire were used for concurrent validity. A sample of suicide attempters and one of healthy volunteers were recruited, since the original aim of the authors was also to assess the ability of KIVS to predict suicide. Most of the correlations between the instruments were high, the interrater reliability of the KIVS (and the subscales) was high too. It is composed by four rating scales assessing exposure to violence (“victim of violence” subscales) and expressed violence behaviour (“used violence” subscales) in childhood (between 6-14 years of age) and adulthood (from 15 years upwards). Questions consist of concrete examples of violent episodes that occurred during lifetime. The ratings (0-5 for each subscale, in total maximum of 20) are based on a semi-structured interview performed by trained clinicians. Moreover, it allows for use of composite scores of its subscales, such as lifetime “expression of violence” and “exposure to violence” lifetime^{17,19}, or “violence in childhood” and “violence in adulthood”¹⁸.

Translation and adaptation

In 2016, our research group asked to original authors for authorization to develop the Italian version of the KIVS. The scale was then translated from English to Italian through an initial translation and back translation process. The English version was translated into Italian by a psychiatrist (RR). Then this translation was back translated in English by another physician (DT). Upon completion of this process, the original author compared the English versions of KIVS and confirmed that the variables had the same meaning.

Training of evaluators and assessment of inter-rater reliability

Within the research group, two senior psychiatrists illustrated then the Italian version to three physicians chosen as evaluators and trained them to the administration and scoring of interviews. These trained researchers were responsible for the data collection, via a personal interview with each patient. A pilot test was conducted on 15 patients to check if the questions were well understood. To note that these 15 answers were not entered in the final database. An interrater reliability analysis was performed to determine consistency between two raters. They rotated in the conduction of the interview, but all attributed an independent scoring. The interrater reliability for the KIVS

subscales ranged from $r = 0.89$ to $r = 0.95$ ($p < .05$). The Italian version of KIVS is attached in the Appendix.

Psychiatric patients and general population

Two samples were recruited in our studies focused on violence: (1) adult patients consecutively admitted in a psychiatric acute ward ($n = 210$); (2) individuals from the general population ($n = 217$). The research project and all the procedures were approved by the local review board, and the participants signed informed consent forms. Patients were administered the KIVS during their hospital stay, whereas the general population completed an online questionnaire, including the KIVS as a self-report instrument. All the participants were evaluated also with the Risky Families Questionnaire²⁰, the Psychological Maltreatment Review²¹, the Positive and Negative Affect Schedule²² and the Social Network Questionnaire²³. Means and Pearson bivariate correlations were computed where appropriate. Independent *t*-test and Z score were calculated to test differences between the two samples and gender differences within both samples. Results are shown in the text, in Figure 1, and in tables (Tabs. I-III).

In the clinical sample, there was a statistically significant difference between males and females on Used violence as a child [$t(208) = 3.241$, $p = .001$] and Victim of violence in adulthood [$t(208) = -2.102$, $p = .037$]. In the general population, a statistically significant difference between males and females was found on Used violence as a child [$t(215) = 3.020$, $p = .003$]. No other gender differences were found in the two subject groups for KIVS means scores.

There were no differences of correlation coefficients between KIVS ratings and the other questionnaires of the clinical and the general population (Z score, $p > 0.05$). In the clinical sample significant inverse correlations were found between the KIVS ratings and age ($-0.15 < r < -.32$). In the general population, these correlations were nonsignificant.

The correlation coefficients of Lifetime expression of violence with Used violence as a child and Used violence as an adult showed a statistically significant difference between the clinical and the general population, respectively Z score = -2.43 , $p = 0.01$, Z score = -3.64 , $p = 0.000$. No other significant differences were found. In the clinical sample, gender specific correlations between the KIVS subscales measuring exposure to and expression of violence showed no differences.

Conclusions

As there is an increasing awareness of relevance of the interpersonal violence issue in public health, the proper and economic assessment of this variable is necessary. Interpersonal violence affects multiple outcomes in be-

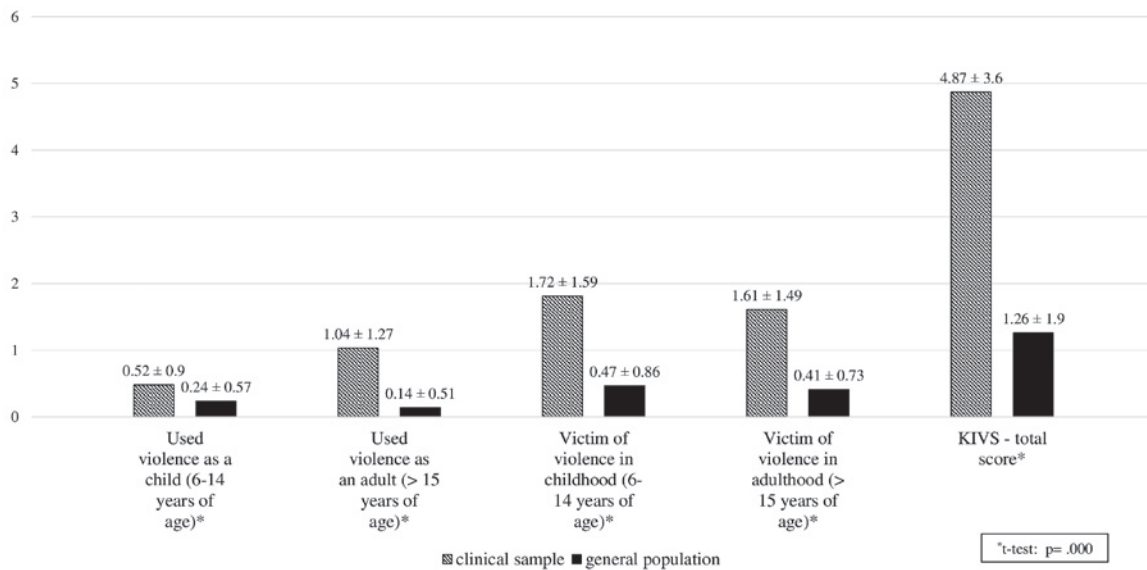


FIGURE 1. Mean scores on the total Karolinska Interpersonal Violence Scale and each of the subscales were calculated for both samples. The independent samples t-test was used for testing statistically significant differences between means.

TABLE I. Correlations between the KIVS subscales and the RFQ, PMR subscales, PANAS subscales and SNQ.

Scale	KIVS subscale									
	Used violence as a child		Used violence as an adult		Victim of violence in childhood		Victim of violence in adulthood		KIVS Total	
	C [‡]	G [§]	C [‡]	G [§]	C [‡]	G [§]	C [‡]	G [§]	C [‡]	G [§]
RFQ	0.89	0.20 [*]	0.22 [*]	0.18 [*]	0.43 [*]	0.46 [*]	0.29 [*]	0.35 [*]	0.41 [*]	0.45 [*]
PMR- M	0.18 [*]	0.17 [†]	0.26 [*]	0.16 [†]	0.46 [*]	0.50 [*]	0.38 [*]	0.22 [*]	0.50 [*]	0.40 [*]
PMR- S	-0.07	-0.13	-0.10	-0.05	-0.15 [†]	-0.20 [*]	-0.16 [†]	-0.4	-0.19 [*]	-0.16 [†]
PANAS- PA	0.23 [*]	0.02	0.18 [†]	0.00	-0.1	-0.11	0.05	0.05	0.09	-0.03
PANAS- NA	0.07	0.15 [†]	0.03	0.30 [*]	0.23 [*]	0.14 [†]	0.15 [†]	0.23 [*]	0.19 [*]	0.28 [*]
SNQ	-0.03	-0.02	0.01	0.00	-0.17 [†]	-0.12	-0.02	0.00	-0.09	-0.06

^{*}p < .01; [†]p < .05; [‡]clinical sample; [§]general population

Note: RFQ: Risky Families Questionnaire; PMR: Psychological Maltreatment Review, M: maltreatment, S: support; PANAS: Positive and Negative Affect Schedule, PA: positive affect, NA: negative affect; SNQ: Social Network Questionnaire; KIVS: Karolinska Interpersonal Violence Scale

TABLE II. Correlations between the Karolinska Interpersonal Violence Scale (KIVS) subscales measuring exposure to and expression of violence in the clinical sample (n = 210) and in general population (n = 217)

	1		2		3		4		5	
	C [‡]	G [‡]	C [‡]	G [‡]	C [‡]	G [‡]	C [‡]	G [‡]	C [‡]	G [‡]
1. Used violence as a child	-	-								
2. Used violence as an adult	0.32 [*]	0.28 [*]	-	-						
3. Victim of violence in childhood	0.20 [*]	0.28 [*]	0.26 [*]	0.36 [*]	-	-				
4. Victim of violence in adulthood	0.20 [*]	0.26 [*]	0.31 [*]	0.38 [*]	0.40 [*]	0.37 [*]	-	-		
5. Lifetime exposure to violence	0.24 [*]	0.33 [*]	0.34 [*]	0.45 [*]	0.85 [*]	0.86 [*]	0.82 [*]	0.80 [*]	-	-
6. Lifetime expression of violence [§]	0.74 [*]	0.83 [*]	0.88 [*]	0.77 [*]	0.28 [*]	0.40 [*]	0.32 [*]	0.40 [*]	0.36 [*]	0.48 [*]

^{*}p < .01; [‡]clinical sample; [‡]general population; [§]statistically significant difference between the clinical and the general population of the correlation with Used violence as a child and Used violence as an adult

TABLE III. Gender-specific correlations between the Karolinska Interpersonal Violence Scale (KIVS) subscales measuring exposure to and expression of violence in general population (males $n = 96$; females $n = 121$).

	1		2		3		4		5	
	M [‡]	F [§]	M [‡]	F [§]	M [‡]	F [§]	M [‡]	F [§]	M [‡]	F [§]
1. Used violence as a child	-	-								
2. Used violence as an adult	0.22*	0.34**	-	-						
3. Victim of violence in childhood	0.22*	0.32**	0.24*	0.41**	-	-				
4. Victim of violence in adulthood ^{††}	0.26*	0.28**	0.61**	0.28**	0.37**	0.37**	-	-		
5. Lifetime exposure to violence	0.29**	0.37**	0.51**	0.43**	0.84**	0.87**	0.81**	0.79**	-	-
6. Lifetime expression of violence ^{†††}	0.88**	0.79**	0.66**	0.84**	0.29**	0.45**	0.50**	0.35**	0.47**	0.49**

* $p < .01$; † $p < .05$; ‡males; §females; **Significant gender difference in used violence as a child ($Z = 2.19$, $p = 0.02$); ††Significant gender difference in used violence as an adult ($Z = -3.08$, $p = 0.02$); †††Significant gender difference in used violence as an adult ($Z = 3.03$, $p = 0.002$)

havioral medicine and mental health, so that a better understanding of its role is needed. KIVS represent a useful tool both in the research and the clinical field.

Conflict of interest

The Authors declare to have no conflict of interest.

References

- Sumner SA, Mercy JA, Dahlberg LL, et al. *Violence in the United States: status, challenges, and opportunities*. JAMA 2015;314:478-88.
- Rossi A, Talevi D. *Interpersonal violence and mental illness*. Journal of Psychopathology 2017;23:49-51.
- Dahlberg LL, Mercy JA. *History of violence as a public health problem*. Virtual Mentor 2009;11:167-72.
- World Health Organization. *Global status report on violence prevention 2014*. Geneva: World Health Organization 2014.
- Sesar K, Dodaj A, Šimić N. *Mental health of perpetrators of intimate partner violence*. Mental Health RevJ 2018;23:221-39.
- Waelde LC, Koopman C, Rierdan J, et al. *Symptoms of acute stress disorder and post-traumatic stress disorder following exposure to disastrous flooding*. J Trauma Dissociation 2001;2:37-52.
- Freyd JJ. *Betrayal trauma: the logic of forgetting childhood trauma*. Cambridge: Harvard University Press 1996.
- Whittington R, Hockenull JC, McGuire J, et al. *A systematic review of risk assessment strategies for populations at high risk of engaging in violent behaviour: update 2002-8*. Health Technol Assess 2013;17:i-xiv, 1-128.
- Jokinen J, Forslund K, Ahnemark E, et al. *Karolinska Interpersonal Violence Scale predicts suicide in suicide attempters*. J Clin Psychiatry 2010;71:1025-32.
- Jokinen J, Königsson J, Moberg T, et al. *Platelet monoamine oxidase activity and interpersonal violence in male suicide attempters*. Psychiatry Res 2018;260:173-6.
- Bendix M, Uvnäs-Moberg K, Petersson M, et al. *Insulin and glucagon in plasma and cerebrospinal fluid in suicide attempters and healthy controls*. Psychoneuroendocrinology 2017;81:1-7.
- Haglund A, Lindh ÅU, Lysell H, et al. *Interpersonal violence and the prediction of short-term risk of repeat suicide attempt*. Sci Rep 2016;6:36892.
- Khemiri L, Jokinen J, Runeson B, et al. *Suicide risk associated with experience of violence and impulsivity in alcohol dependent patients*. Sci Rep 2016;6:19373.
- Stefansson J, Nordström P, Runeson B, et al. *Combining the Suicide Intent Scale and the Karolinska Interpersonal Violence Scale in suicide risk assessments*. BMC Psychiatry 2015;15:226.
- Moberg T, Stenbacka M, Jönsson EG, et al. *Risk factors for adult interpersonal violence in suicide attempters*. BMC Psychiatry 2014;14:195.
- Sinai C, Hirvikoski T, Nordström AL, et al. *Thyroid hormones and adult interpersonal violence among women with borderline personality disorder*. Psychiatry Res 2015;227:253-7.
- Sinai C, Hirvikoski T, Wiklander M, et al. *Exposure to interpersonal violence and risk of post-traumatic stress disorder among women with borderline personality disorder*. Psychiatry Res 2018; 262:311-5.
- Talevi D, Imburgia L, Luperini C, et al. *Interpersonal violence: identification of associated features in a clinical sample*. Child Abuse Negl 2018; 86:349-57.
- Rossi A, Talevi D, Collazzoni A, et al. *From basic human values to interpersonal violence: a mental illness sample*. J Aggress Maltreat Trauma 2019;Mar 13.
- Benedetti F, Radaelli D, Poletti S, et al. *Emotional reactivity in chronic schizophrenia: structural and functional brain correlates and the influence of adverse childhood experiences*. Psychol Med 2011;41:509-19.
- Briere J, Godbout N, Runtz M. *The psychological maltreatment review (PMR): initial reliability and association with insecure attachment in adults*. J Aggress Maltreat Trauma 2012;21:300-20.
- Terracciano A, McCrae RR, Costa J. *Factorial and construct validity of the Italian Positive and Negative Affect Schedule (PANAS)*. Eur J Psychol Assess 2003;19:131-41.
- Magliano L, Fadden G, Madianos M, et al. *Burden on the families of patients with schizophrenia: results of the BIOMED I study*. Soc Psychiatry Psychiatr Epidemiol 1998;33:405-12.

How to cite this article: Talevi D, Pacitti F, Parnanzone S, et al. *The Karolinska Interpersonal Violence Scale, Italian version*. Journal of Psychopathology 2019;25:115-9.

Appendix

KAROLINSKA INTERPERSONAL VIOLENCE SCALE (KIVS)

Versione italiana a cura di Talevi D, Rossi R

NOME e COGNOME _____ **ID** _____

I livelli di questa scala sono definiti da brevi affermazioni riguardanti i comportamenti violenti. Sull'intervista con il soggetto, usare il punteggio più alto quando una o più affermazioni possono essere applicate.

Violenza perpetrata

Infanzia (6-14 anni)

- 0 Nessuna violenza.
- 1 Sporadiche risse, ma nessun motivo di allarme tra gli adulti della scuola o della famiglia.
- 2 Spesso coinvolto in risse.
- 3 Spesso provoca risse. Picchia i compagni che sono stati bullizzati. Continua a picchiare dopo che l'altro si è arreso.
- 4 Bullizza per primo. Picchia spesso gli altri bambini, con pugni o oggetti.
- 5 Causa lesioni fisiche gravi. Violento contro uno o più adulti. Il comportamento violento causa l'intervento dei servizi sociali.

Età adulta (≥ 15 anni)

- 0 Nessuna violenza
- 1 Schiaffeggia o sculaccia i figli occasionalmente. Spintona o strattona il partner o un altro adulto.
- 2 Occasionalmente colpisce il partner o i figli. Partecipa a risse quando è ubriaco.
- 3 Aggredisce il partner da ubriaco o da sobrio. Ripetute punizioni corporali ai figli. Frequenti risse da ubriaco. Colpisce gli altri da sobrio.
- 4 Casi di abuso sessuale violento. Ripetuti pestaggi o abusi fisici di figli o partner. Aggredisce gli altri frequentemente, da sobrio o da ubriaco.
- 5 Ha ucciso o ha causato lesioni personali gravi. Ripetuti casi di violenza sessuale. Condannato per reati violenti.

Vittima di violenza

Infanzia (6-14 anni)

- 0 Nessuna violenza.
- 1 Sporadici schiaffi. Fa a botte a scuola, ma di non grande significato.
- 2 Bullizzato occasionalmente per brevi periodi. Occasionalmente esposto a punizioni corporali.
- 3 Spesso bullizzato. Frequentemente esposto a punizioni corporali. Picchiato da genitori ubriachi.
- 4 Ha subito bullismo per tutta l'infanzia. Picchiato dai compagni di scuola. Regolarmente picchiato da un genitore o da un adulto. Picchiato con oggetti. Abusato sessualmente.
- 5 Esposizione ripetuta alla violenza a casa o a scuola, con almeno un grave esito fisico. Abusi sessuali ripetuti, o abusi sessuali che abbiano esitato in una lesione fisica.

Età adulta (≥ 15 anni)

- 0 Nessuna violenza
- 1 Minacciato o soggetto a un basso livello di violenza almeno in un'occasione.
- 2 Picchiato dal partner occasionalmente. Vittima di scippi. Minacciato con oggetti.
- 3 Minacciato con un'arma. Rapinato. Picchiato da qualcuno che non sia il partner.
- 4 Stuprato. Percosso.
- 5 Stuprato ripetutamente. Percosso ripetutamente. Gravemente percosso, con lesioni fisiche gravi.

This material originally appeared in English as Appendix (the KIVS), page 1032, from J Clin Psychiatry 2010;71:1025-32 (translated with permission of the authors).