

# Violence in severe mental disorders: the association with age at onset and gender

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**Summary. Aim.** The aim of this study is to investigate the relation between perpetration and victimization of violence with gender and age at onset of mental disorders in patients with severe mental disorders. **Methods.** 216 patients were recruited and evaluated with the Italian version of the Karolinska Interpersonal Violence Scale. **Results.** We found higher levels of victimization of violence in women than men and more violence in patients with lower age at onset. **Discussion.** Gender and age at onset impact on violence in the adult life in a sample of patients with severe mental disorders. **Conclusions.** Our findings confirmed the need of an early diagnosis and gender-tailored management of interpersonal violence.

**Key words.** Age at onset, gender, KIVS, violence.

*La violenza nel contesto dei disturbi mentali gravi: l'associazione con l'età di esordio e il genere.*

**Riassunto. Scopo.** Lo scopo di questo studio è di indagare la relazione tra la violenza perpetrata e subita con il genere e l'età di esordio in pazienti con gravi disturbi mentali. **Metodi.** Sono stati reclutati 216 pazienti, successivamente valutati con la versione italiana della Karolinska Interpersonal Violence Scale (KIVS). **Risultati.** Sono stati riscontrati livelli più elevati di vittimizzazione nelle donne rispetto agli uomini e più violenza nei pazienti con un'età d'esordio inferiore. **Discussione.** Il genere e l'età d'esordio incidono sui livelli di violenza nella vita adulta di un campione di pazienti con gravi disturbi mentali. **Conclusioni.** I risultati ottenuti hanno confermato la necessità di una diagnosi precoce e di una gestione della violenza interpersonale adeguata al genere.

**Parole chiave.** Età d'esordio, genere, KIVS, violenza.

## Introduction

Interpersonal violence (IV) in mental disorders is host of health and social consequences<sup>1</sup>. It encompasses expression (i.e., perpetration) of and exposure (i.e., victimization) to violence, which are associated with different risk factors, health consequences and management<sup>2</sup>. Among demographic variables, gender has received large attention so far<sup>2</sup>. Globally, evidence suggests that men represent the majority of perpetrators and women the majority of victims<sup>2</sup>.

Active symptoms or relapse seem to be the main clinical culprits of IV<sup>2</sup> but it is very likely that other factors play a role. Age at onset of the mental disorder is a putative factor<sup>3</sup>. Scientific evidence shows that violence in childhood triggers, aggravates, maintains, and increases the recurrence of psychiatric disorders<sup>4</sup>. In a heterogeneous psychiatric sample, violent behavior was associated with lower age at onset and lower age at first treatment<sup>5</sup>. In schizophrenic samples, earlier age at onset correlates with childhood adversities and trauma<sup>6</sup>. In a forensic sample, age at onset and violence was described as characterized by a complex relation in which a greater number of static/historical risk factors are involved<sup>7</sup> (i.e., previous violence, young age at first violent incident, early maladjustment, relationship instability).

The aim of this study is to investigate the relation between interpersonal violence with gender and age at onset in patients with severe mental disorders in need for hospital admission. Our hypothesis is that gender and age at onset have an effect on perpetration and victimization of violence in the adult life in a sample of patients with severe mental disorders. We expect that female gender is associated with higher levels of victimization and male gender with perpetration; we also expect that an early onset of a mental disorder is associated with higher levels violence in adult life, both perpetration and victimization.

## Methods

### STUDY DESIGN, PARTICIPANTS, AND PROCEDURES

This study was cross-sectional. Approval from the local ethics committee was obtained. 216 consecutively admitted patients to a psychiatric acute ward for an index episode were recruited, after being informed through clinical interview and leaflets. ICD-IX diagnoses were established by senior psychiatrists. Inclusion criteria were age from 18 to 65 years and ability to give informed consent. Exclusion criteria included language barriers, impaired consciousness, severe aphasia, and cognitive deficits. Written informed consent was provided.

## MEASURES

The Italian version of the Karolinska Interpersonal Violence Scale (KIVS)<sup>8</sup> was used. It contains four subscales assessing exposure to and expression of violent behavior during childhood and adulthood. It allows also for use of composite scores of its subscales. In the current study, we used the “victim of violence in adulthood” (i.e., being physically or sexually abused, being beaten or threatened) and the “used violence in adulthood” (i.e., slapping or spanking children, assaulting partner or other people, sexual abuse) subscales.

## STATISTICAL ANALYSES

Data were analyzed using the Statistical Package for Social Sciences (SPSS, version 24, IBM, USA). Mean±SD, and frequencies were calculated for descriptive analysis. A two-way multivariate analysis of covariance (MANCOVA) was conducted to test the gender and age at onset effects on violence in adulthood. We calculated the median value of age at onset to transform it in a categorical variable (i.e., early vs late onset). Age was introduced in the model as a covariate variable.

## Results

The sample was composed of 113 male patients (52.30%) and 103 (47.70%) female patients, with a mean age of 41.25±12.30 years. Mean age at onset of mental disorders was 27.19±11.67 years and the median age at onset of mental disorders was 24. Most of them belonged to the lower class, had a medium level of education (secondary or high school, 75.90%), were single (59.70%) and unemployed (53.70%). 45.8% of the sample was diagnosed as affected by psychoses ( $n=99$ ), 32.4% by mood disorders ( $n=70$ ), and 21.8% by personality disorders ( $n=47$ ). The KIVS mean scores are shown in table 1.

The two-way MANCOVA did not report a statistically significant interaction between gender and age at onset on the dependent variables of violence in adulthood. Women reported higher levels of victimization of violence (i.e., being physically or sexually abused, being raped, battered, beaten or threatened) than men ( $p=.022$ ); patients with lower age at onset of illness reported higher scores for victimization ( $p<.005$ ) and perpetration ( $p<.001$ ). Men showed higher levels of perpetration of violence (i.e., slapping or spanking children, assaulting partner or other people, sexual or physical abuse towards children, partner or other people), but no statistically significant difference was found with women.

**Table 1.** KIVS Mean Scores and Standard Deviations (SD).

	Perpetration in adulthood		Victimization in adulthood	
	M	SD	M	SD
Total sample	1.05	1.26	1.59	1.48
<b>Gender</b>				
Male	1.18	1.28	1.39	1.21
Female	0.90	1.23	1.81*	1.70
<b>Age at onset</b>				
Early	1.42	1.43	1.92	1.51
Late	0.64 <sup>§</sup>	0.90	1.22 <sup>†</sup>	1.35

Note: Early onset of severe mental disorder  $\leq 24$  years of age; Late onset of severe mental disorder  $\geq 25$  years of age.

General Linear Model: multivariate analysis of covariance with age as covariate:

\*Gender-KIVS Victimization in Adulthood:  $F(1, 216)= 5.32$ ,  $p= 0.022$ .

<sup>§</sup>Age at onset-KIVS Perpetration in Adulthood:  $F(1, 216)= 11.74$ ;  $p= 0.001$ ;

<sup>†</sup>Age at onset-KIVS Victimization in Adulthood:  $F(1, 216)= 8.27$ ,  $p= 0.004$ .

## Discussion

The main finding of this study is that gender and age at onset of mental disorders are independently associated with different levels of interpersonal violence in adulthood. Specifically, gender has an influence on level of exposure of violence, with women in our sample reporting higher levels of exposure to violence, whereas age at onset impacts on both exposure to and expression of violence, with lower age at onset associated with more violence in both men and women. As traumatic events, as interpersonal violence, are not specifically related to any diagnostic groups<sup>4</sup>, we were not aiming at this hypothesis.

These findings are in line with the current literature. Epidemiological studies on this issue found that males commit acts of violence at greater rates than females and that females are more often victims of violence; however, a paucity of other studies came to different conclusions<sup>2</sup>. Our recent study investigating the diagnosis-gender patterns associated with violence<sup>2</sup> confirmed the results concerning the victimization pattern, reporting that females are the main victims of interpersonal violence. As perpetration of violence, we failed to find a significant gender differ-

ence<sup>2</sup>. This finding could be due to several reasons, including the small sample size.

As regards age at onset of mental disorders, previous studies found that this clinical variable has an association with child abuse and severity of psychopathology<sup>4</sup>, above all in people affected by schizophrenia<sup>6</sup>. Our study showed a median age at onset of mental disorders of 24 years: this result is in line with other studies<sup>5,7</sup>. Moreover, the association we found between earlier age at onset and violence is concordant with previous researches: people who engaged in violent behavior showed a mean age at onset of 24.3 years, whereas for those who never committed violent acts the mean age was greater<sup>5</sup>.

Our findings are relevant in light of notion that an early diagnosis and an integrated psychosocial management, gender-tailored, is important in the management of interpersonal violence. Male and younger clients should be actively monitored for risk of interpersonal violence. Brief rating scale instruments should be considered.

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*Conflict of interests:* the authors have no conflict of interests to declare.

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