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## **Interpersonal sensitivity, bullying victimisation and paranoid ideation among help-seeking adolescents and young adults.**

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## **Abstract**

### **Aim**

The effects of a negative interpersonal experience such as bullying victimisation in childhood and adolescence can be strong and long lasting. Bullying victimisation is associated with paranoid ideation and suspiciousness. Few studies have focused upon personality traits of victims of bullying. The aim of this study is to investigate whether a particular personality trait called interpersonal sensitivity may be related to suspiciousness in those who experienced bullying victimisation.

### **Methods**

The study sample consisted of 147 help-seeking adolescents (mean age 16 years) selected after a screening phase (Prodromal Questionnaire) and evaluated with the Structured Interview for Psychosis-risk Syndromes (SIPS). All participants were specifically asked if they had experienced either psychological bullying or physical bullying and completed the Interpersonal Sensitivity Measure (IPSM).

### **Results**

Of the whole sample, 30 (20%) participants had experienced psychological bullying or physical bullying at least once in the life. Performing a multiple regression, bullying victimisation was found to be an independent predictor of subtle paranoid ideation and suspiciousness. Interpersonal sensitivity was also found to be an independent predictor of subtle paranoid ideation; in particular two IPSM subscales, fragile inner-self and separation anxiety, showed a significant correlation with subtle paranoid ideation.

### **Conclusions**

Our results confirmed that bullying victimisation is a negative interpersonal experience associated with paranoid ideation and suspiciousness. However, being overly sensitive and having negative beliefs about the self as fragile and vulnerable to threat also lead to a tendency to attribute experiences as externally caused and, in turn, facilitate the formation and maintenance of paranoid ideation.

**Key words:** interpersonal sensitivity, bullying victimisation, paranoid ideation, adolescents

## **Introduction**

The effects of a negative interpersonal experience such as bullying victimisation in childhood and adolescence can be strong and long lasting (Suzet et al., 2015). Olweus (1994) defines bullying victimisation as exposure, repeatedly and over time, to aggression on the part of one or more peers, to deliberately hurt the victim physically, verbally or psychologically while the victim is incapable of defending himself/herself. Bullying victimisation is associated with a myriad of emotional and behavioural problems throughout adolescence (Arseneault et al., 2010). Many researchers focused on emotional problems such as social anxiety, self-esteem, depression, aggression or suicide (Sourander et al., 2007; Zwierzyńska et al., 2013; Winsper et al., 2012; Stapinski et al., 2014). However bullying victimisation was also found to be associated with subclinical psychotic experiences (Kelleher et al., 2008; Lataster et al., 2006). Early adverse experiences are postulated to create an enduring cognitive vulnerability, characterised by negative schematic models of the self and others (e.g. I am vulnerable, others are dangerous) (Garety et al., 2001; Bebbington et al., 2004; Freeman & Garety, 2014), and previous research has proposed that (negative) interpersonal experiences, are associated with paranoid ideation and suspiciousness (Gracie et al., 2007). Studies in individuals at high risk to develop psychosis reported significantly more experiences of bullying victimisation than healthy controls, together with increased levels of depression and anxiety, a poorer sense of self (Bentall et al., 2001) and with increased paranoid ideation in later life (Addington et al., 2013).

Few studies have focussed upon personality traits of victims of bullying; some psychological researchers showed that adolescents who experienced bullying victimisation are more likely to be introverted and have low self-esteem (Kaltiala-Heino et al., 2000; Kumpulainen et al., 2001; Arseneault et al., 2010; Bond et al., 2001; Fekkes et al., 2006). Interpersonal sensitivity is a personality trait that defines an extreme sensitivity to interpersonal interactions, the constant perception of self-deficiencies in relation to others, the need to behave in such a way as to minimize the risk of negative evaluation and the feeling of having a bothersome core-self that needs to be hidden from others (Boyce & Parker, 1989; Davidson et al., 1988, 1989). High interpersonal sensitivity has been found to be closely linked to low self-confidence, feelings of insecurity, and low self-esteem (Boyce & Parker, 1989). In line with cognitive models, negative beliefs about the self as fragile and vulnerable to threat may lead to a tendency to attribute experiences as externally caused and, in turn, facilitate the formation and maintenance of paranoid ideation (Garety et al., 2001; Freeman & Garety, 2014); other studies also showed that paranoid thoughts may build upon interpersonal anxieties and worries such as fear of rejection (Freeman et al., 2005). Some recent

studies showed that interpersonal sensitivity is correlated to subtle suspiciousness and persecutory ideations among individuals at high risk to develop psychosis and non-clinical samples (Valmaggia et al., 2007; Masillo et al., 2012; Joo et al., 2012; Freeman & Garety, 2014).

Together, the above evidence suggests that being overly sensitive and being a victim of bullying are both related to the presence of a more “paranoid” view of the world.

With the present study, we wanted to investigate whether heightened interpersonal sensitivity together with bullying victimisation could result in a generalised suspiciousness and increased paranoid ideation.

### **Aims of the study**

The first aim of the present study was to evaluate if bullying victimisation was related to a more “paranoid” view of the world in adolescents and young adults who were help-seeking for psychological problems. The second aim was to evaluate the role of a personality trait, interpersonal sensitivity, among the association between bullying victimisation and subtle paranoid thoughts and suspiciousness. We hypothesized that victims of bullying victimisation with higher level of interpersonal sensitivity, are more likely to have a “paranoid” view of others and the world.

### **Materials and Methods**

#### **Setting and sample**

Data were collected in six Adult (AMHS) and Child and Adolescent Mental Health Services (CAMHS) located in one of the eight Local Health Districts of Rome, Italy, i.e. the Rome H area, between January 2012 and January 2015 as part of the early detection project “Liberiamo il Futuro” (LIF). The project included all help-seeking young people aged 12–35 years old (mean age 16) who resided in the above mentioned Rome Health District; source of referrals were GPs and other health care specialists, family members and friends, school members and legal agencies as well as self-referrals. Exclusion criteria for the LIF project include psychiatric disorders or symptoms due to a somatic factor or psychotropic substances, IQ below 70, and insufficient knowledge of Italian or other communication problems severely impairing clinical assessments. Full details of the LIF study are provided in Brandizzi et al., 2014.

The sample included in the present study consisted of 147 adolescents and young adults selected after a screening phase and evaluated with the Structured Interview for Psychosis-risk Syndromes (SIPS) (see below).

## **Instruments**

Socio-demographic (age, gender, educational level, employment status) as well as referral reason, and details about previous psychiatric treatment were recorded during a clinical assessment using a semi-structured questionnaire.

### **Bullying victimisation**

Participants were asked if they had experienced either psychological bullying or physical bullying at least once in their life. This yes/no question was a part of a longer assessment of stressful life events.

### **Social and Role functioning**

Social and role functioning were assessed using the Global Functioning: Social Scale (GFSS) and the Global Functioning: Role Scale (GFSR; Cornblatt et al., 2007). UHR criteria were assessed by the SIPS (Miller et al., 2002). The assessment lasted approximately 2 and half hour and it was usually divided into two sessions. All the assessments were conducted by the same person, specifically a psychiatrist, a resident in psychiatry or a clinical psychologist trained for SIPS and SPI-A and SPI-CY.

### *Structured Interview for Psychosis-risk Syndromes (SIPS).*

The SIPS (Miller et al., 2002) is a semi-structured interview consisting of five items on positive symptoms, six on negative symptoms, four on disorganisation symptoms, and four on general symptoms, where each item is scored from 0 to 6 (0=asymptomatic, 6=severe, psychotic). Positive symptom items are unusual thought content/delusional ideas, suspiciousness/ persecutory ideas, grandiose ideas, perceptual abnormalities/hallucinations, and conceptual disorganisation. The SIPS also includes a schizotypal personality disorder checklist, a family history of mental illness, and a global assessment of functioning ability (GAF), and it rules out current or past psychosis. Preliminary reliability and validity studies have shown that it is a useful tool for differentiating prodromal patients from non-prodromal ones (inter-rater kappa=0.81, psychotic conversion rate 54% at 12 months, Miller et al., 2002).

*Interpersonal Sensitivity Measure (IPSM).* To measure interpersonal sensitivity, we used the Italian version (Masillo et al., 2014) of Interpersonal Sensitivity Measure (IPSM, Boyce & Parker, 1989), a

36-item self-report questionnaire. Self-statements are rated on a four-point scale (1=very unlike self, 4=very like self). The level of interpersonal sensitivity is calculated by summing up the scores for each item. The factor structure of the IPSM consists of the following five components: (1) “inter-personal awareness” (seven items, range 1–28); (2) “need for approval” (eight items, range 8–32); (3) “separation anxiety” (eight items, range 8–32); (4) “timidity” (eight items, range 8–32); and (5) “fragile inner-self” (five items, range 5–20). The IPSM has been found to have good internal consistency (a values from 0.85 to 0.86), test–retest reliability ( $r=0.70$ ) and correlation with clinical judgment ratings of interpersonal sensitivity ( $r=0.72$ ).

### **Data analysis**

Analyses were conducted using SPSS 20.0. Descriptive analysis including mean and SD for continuous variables and absolute and relative frequencies for categorical variables were performed. Exact P-values are reported with the exception of test statistics with low probability where  $p<0.01$  was used. Effects of bullying victimisation and interpersonal sensitivity on subtle paranoid ideation were independently explored by a hierarchical regression: demographic covariates were entered first and clinical predictors were added into the model in subsequent steps. R-square for the initial model and R-square change for each step of the model were reported. Comparison of Interpersonal Sensitivity Measure means between participants with bullying victimisation experiences and those without bullying victimisation experiences were performed using independent t-tests; effect sizes were also calculated.

### **Ethical Approval**

The study was given ethical approval by the local research and ethics committee and conforms to the provision of the Declaration of Helsinki.

### **Results**

The sample included 147 help-seekers adolescents and young adults. The socio-demographic characteristics of the three groups are shown in table 1.

---Table 1---

About half of participants were female (49.7%;  $n = 73$ ) and the mean age of participants was 16.88 years (SD: 4.9). Seventy-eight per cent ( $N=115$ ) of the sample indicated being enrolled in some

form of education; according with the mean age of the sample the majority of them had completed primary or lower secondary school (N=118, 80%).

The clinical characteristics of the sample are shown in table 2.

---Table 2---

The main reason for referral for the majority of the sample was relational or school problems (29%, N=43), anxiety symptoms (27%, N= 40) and depression/mood liability (25%, N=37). The mean social functioning (measured by GFSS) was 6.45 (SD: 1.38) referring to a moderate/ mild impairment in social functioning that is beyond an expectable reaction to a psychosocial stressor. The mean role functioning (measured by GFRS) was 6.23 (SD: 1.66) indicating moderately/mildly impaired functioning. Of the whole sample, 30 (20%) subjects had experienced psychological bullying or physical bullying at least once in the life. Total IPSM score was 94.46 (S.D.=17.25). Sixty subjects (40.8%) met UHR criteria according to SIPS. The mean score of suspiciousness-persecutory ideation (as measured by the item P2 of the SIPS) was 1.12 (S.D.=1.18). This score is between doubtful presence and low level symptoms; it indicates people who were circumspect, excessively vigilant without an evident danger and who feel constantly unsafe.

To estimate the relationship between bullying victimisation, subtle persecutory ideation and interpersonal sensitivity a multiple regression analysis was conducted (see table 3).

---Table 3---

Experiences of psychological or physical bullying victimisation were found to be a significant independent predictor of subtle suspiciousness-persecutory ideation ( $\beta=0.25$ ,  $p<.01$ ). Personality traits such as feelings of having a fragile and bothersome core-self that needs to be hidden from others (“fragile inner-self” IPSM subscale;  $\beta=0.26$ ,  $p<.01$ ) and high level of separation anxiety (“separation anxiety” IPSM subscale  $\beta=0.28$ ,  $p=.01$ ) were also independent predictors of subtle suspiciousness-persecutory ideation. Furthermore, while interpersonal sensitivity scores explain the 17% of the variance in the level of attenuated suspiciousness-persecutory ideation, bullying victimisation explains only the 8%.

Finally, participants with bullying victimisation experiences reported greater “interpersonal awareness” than those without experiences ( $21.37\pm3.52$  vs.  $19.41\pm5.06$ ,  $p=.048$ ,  $r=.16$ ), however the other interpersonal sensitivity components did not differ between the two groups.

## Discussion

In this study we explored the association between the presence of subtle suspiciousness-persecutory ideation, level of interpersonal sensitivity and experiences of bullying victimisation.

Bullying victimisation is a commonly recognised problem; in line with global data (WHO 2012), it is estimated to affect one-third of adolescents in Italian schools ([www.doxa.it/news/cosa-vuol-dire-essere-un-adolescente-oggi/#more-3069](http://www.doxa.it/news/cosa-vuol-dire-essere-un-adolescente-oggi/#more-3069)). Our findings showed a lower rate: one fifth of the whole sample reported experiences of bullying victimisation, even though the main reason of referral to psychiatric services was relational or school problems (29%). One possible explanation for the lower rate may be that experiences of bullying victimisation was evaluated by a clinical interview and not by a self-reported instrument; participants involved in the study could have under-reported their experiences.

Many studies support the role of bullying victimisation in the development of clinical and non-clinical psychotic symptoms later in life (van Dam et al., 2012). In particular, bullying victimisation is reported by people who suffer from persecutory delusions to a higher degree than those who do not (Lopes et al., 2012). Childhood bullying victimisation has also been associated with paranoid ideation in people at ultra high risk for psychosis (Valmaggia et al., 2015). Our result, even if in a cross-sectional scenario, confirmed this association: bullying victimisation was an independent predictor of subtle suspiciousness-persecutory ideation among our sample. The experience of being bullied may be related to negative schemas of the self and the world (Gracie et al., 2007). Crittendon & Ainsworth (1989) argue that bullied children have a tendency to be hypervigilant to hostile cues in their environment. They may become suspicious of others' intentions, which in turn may predispose them to subtle psychotic symptoms such as paranoia or ideas of reference (Morrison et al., 2003). It is important to note that non-clinical psychotic symptoms are a risk factor for the subsequent development of psychotic disorder (Poulton et al., 2000). This highlights the importance of early school-based interventions, designed to stop bullying. It could also be of importance to evaluate children who have been bullied for possible psychotic symptoms, because these symptoms may be early markers of clinical psychotic symptoms and, at that stage, may be subject to effective intervention.

The second aim of the present study was to evaluate the role of a personality trait, interpersonal sensitivity, among the association between bullying victimisation and subtle paranoid thoughts and suspiciousness. Interestingly, IPSM total and subscales scores of the sample were similar to those reported by ultra high risk for psychosis subjects (Masillo et al., 2012; Joo et al., 2012), even though the sample presented mixed clinical characteristics. This result may be explained by the high

rate of psychotic-like experiences among adolescents (Kelleher et al., 2012). Our results showed that interpersonal sensitivity is associated with persecutory ideations: the “fragile inner-self” and “separation anxiety” IPSM subscales were independent predictor of subtle paranoid ideation. This is in line with cognitive models which propose that negative beliefs about the self (e.g., as vulnerable, weak and unlovable) may combine with threatening appraisals of others (e.g., implying that others are dangerous or untrustworthy), igniting negative emotions (particularly anxiety), and thereby being related to feelings of threat and paranoia (Garety et al., 2001). Interpersonal sensitivity, in part may define the before mentioned beliefs about the self (Boyce & Parker, 1989; Davidson et al., 1988, 1989). In particular, the IPSM subscale “fragile inner-self” is defined as the feeling of having a bothersome and fragile core-self that needs to be hidden from others and the expectation of criticism or rejection; as stated by Freeman and Garety (2014) in a recent review about persecutory delusion, paranoid ideation can be considered as an extension of such concerns. Moreover, it is important to underline the possible affinity between the notion of “fragile inner-self” and the phenomenological model of self-disturbance, defined by some authors as a core clinical feature of schizophrenia spectrum disorders (Sass & Parnas, 2003) and reported in UHR (Nelson et al., 2012). In particular, some aspect of this model (such as a “sense of inner void”, “a sense of passivity in relation to the world and others”, “experiencing the physical presence and contact of others as threatening to one’s existence in some way” and “a tendency to excessively monitoring inner life, while at the same time interacting in the world”; Parnas et al., 2005) may have some similarities to fragile inner self aspects of interpersonal sensitivity. According to this model, the fragile inner-self aspect of interpersonal sensitivity could be considered as a first and less severe step of the psychotic breaking up.

“Separation anxiety” measures the level of anxiety that an individual experiences when separated from a significant other. This aspect indicates feelings of uncertainty and vulnerability in interpersonal relationship, with a tendency to be overly sensitive to any threat to the integrity of interpersonal bonds (Boyce & Parker, 1989). Etiological base of this personality trait may be searched in early altered and insane parental relationship (Fagioli, 1972; Bowlby, 1977; Otani et al., 2012). This excessive fear of abandon may lead to a certain tendency to externally attribute hostility and cruelty.

The cross-sectional nature of our data does not enable us to investigate the ‘reverse causality hypothesis’ (van Winkel et al., 2013). It is conceivable that overly sensitive personality traits might increase the chance of being bullied. We can also hypothesised that levels of interpersonal sensitivity (in particular inner self fragilities) might be worsened by being victim of bullying, with a consequent exacerbation of suspiciousness (Dill et al., 2004). As the findings of this cross-sectional

study were largely correlational, further researches will be required to examine the relationship between interpersonal sensitivity and long-term outcomes, in terms of developing a full-blown paranoid ideation, of individuals who are victims of bullying, to assess whether interpersonal sensitivity may predict the clinical features of potential future psychosis when facing a negative experience such as bullying.

In conclusion, our study confirmed that having heightened interpersonal sensitivity and facing a negative experience like bullying victimisation may be associated with the presence of subtle psychotic symptoms such as paranoia or ideas of reference. Thus, together with information and prevention campaigns about bullying in primary and secondary schools, assessing levels of interpersonal sensitivity and planning targeted psychotherapeutic interventions to fight potential difficulties in interpersonal relationships may be an important psychosis prevention target.

## **Limitations**

Our results should be interpreted in view of the limitations of this study. The main limitation is that the study was cross-sectional: the lack of follow-up data do not allow us to draw any conclusion in terms of evolution and the changes of the paranoid ideations and its longitudinal relationship with interpersonal sensitivity in a sample of victims of bullying. Another limitation was the unavailability of data about refusal rate; a high refusal rate was identified in preliminary baseline data of the same project (Brandizzi et al., 2014). Moreover, no data are available about the temporal stability of interpersonal sensitivity in subjects who are passing through adolescence into adulthood. Another limitation, as mentioned before, is that bullying victimisation was simply assessed using a yes/no question during the clinical assessment and not by specific questionnaire assessing the period of life when bullying experience occurred, its duration, frequency, intensity and possible consequent physical injuries. Furthermore, the lack of data about other kinds of childhood trauma (such as domestic violence, child sexual, emotional or physical abuse, etc.) did not allow us to draw any conclusion about a sort of predisposition of the participants to the study to be exposed to psychological or physical violence. Finally, the lack of a healthy controls sample impedes to compare the association between bullying victimisation and paranoia among people with different levels of interpersonal sensitivity.

## **Conflict of interest**

On behalf of all authors, the corresponding author states that there is no conflict of interest.

## **Ethical standards**

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1964 and its later amendments.

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