An Italian validation of the Psychological Maltreatment Review (PMR)

Una convalida italiana della Psychological Maltreatment Review (PMR)

FRANCESCA PACITTI[1*], DALILA TALEVI[1], GIULIA RICCOBONO[1], LORENZO IMBURGIA[1], VALENTINA SOCCI[1], PAOLO STRATTA[2], RODOLFO ROSSI[3]

*E-mail: francesca.pacitti@univaq.it

[1]Department of Applied Clinical Sciences and Biotechnology, University of L'Aquila, Italy
[2]Department of Mental Health, ASL 1, L'Aquila, Italy
[3]Department of Systems Medicine, University of Rome Tor Vergata, Rome, Italy

SUMMARY. Purpose. The aim of the current study was to evaluate the construct validity and the internal consistence of the Italian version of the Psychological Maltreatment Review (PMR), and to assess the concurrent validity to provide adequate and reliable instruments to measure retrospectively child psychological maltreatment in the Italian population. **Methods.** The participants to our study were 209 patients and 217 nonclinical subjects. The first group consisted in 209 adult patients, 106 males and 103 females (mean age of 41.43 years; SD=12.34) consecutively admitted at the psychiatric unit of the L'Aquila San Salvatore Hospital. The second group consisted in 217 non-clinical subjects, 96 males and 121 females (mean age of 36.38; SD=10.38) that completed an online survey, including the self-report version of the PMR and the Risky Families Questionnaire (RFQ). All subjects were invited to answer to Sociodemographic Information Form and to take a self-report battery composed by two instruments: the Psychological Maltreatment Review (PMR) and the RFQ. **Results.** Internal consistency reliability analyses were performed separately for the two samples, all the scales had very good internal consistency in both samples, with Cronbach's alpha coefficients equal or greater than .88. An EFA was performed, using exploratory principal axis factoring, on the data of individuals from the non-clinical sample, separately for paternal and maternal scales, followed by varimax rotation and scree testing. The CFA was performed on the data of the patients' sample, separately for paternal and maternal scales, supported a three factor model yielding the best fit indexes, both for paternal scales, χ^2=725, p<.001; df=402, CFI=0.92; TLI=0.91, SRMR=0.053, RMSEA=0.063, 90% CI [0.056, 0.07]; and maternal scales, χ^2=758, p<.001; df=374, CFI=0.89; TLI=0.88, SRMR=0.064, RMSEA=0.07, 90% CI [0.06, 0.07]. The CFA performed on the patient' sample supported a three factor model yielding the best fit indexes. The convergence of the EFA and the CFA in different samples supported the structural validity of the PMR and replicated its factorial structure, for both maternal and paternal ratings. **Conclusions.** This study provides evidence on the appropriateness of the Italian version of the PMR to retrospectively measure childhood psychological maltreatment. The three PMR scales (psychological abuse, psychological neglect and psychological support) demonstrated good internal consistency with average alpha coefficients, equal or greater than .88. The findings provide evidence of the construct validity, according to the literature, suggesting that psychological abuse, psychological neglect and parental support are dimensionally separated constructs, as defined in the literature.

KEY WORDS: PMR, Child Maltreatment, neglect, psychological maltreatment, child abuse.

RIASSUNTO. Introduzione. L'obiettivo di questo studio era quello di valutare la validità di costrutto e la coerenza interna della versione italiana della Psychological Maltreatment Review (PMR), e di stimare la validità concorrente al fine di fornire strumenti validi e affidabili per indagare retrospettivamente il maltrattamento infantile nella popolazione Italiana. **Metodi.** I partecipanti erano divisi in due gruppi. Il primo era formato da 209 pazienti, 106 maschi e 103 femmine (età media di 41.43 anni; DS=12.34), afferenti al Reparto di Psichiatria dell'Ospedale San Salvatore dell'Aquila. Il secondo gruppo era composto di 217 soggetti sani, 96 maschi e 121 femmine (età media di 36,38 anni; DS=10,38) che hanno completato tramite internet la batteria testologica che includeva le versioni auto-somministrate della PMR e del Risky Families Questionnaire (RFQ). **Risultati.** Le analisi sull'affidabilità di coerenza interna sono state effettuate separatamente per ciascun campione, tutte le scale hanno dimostrato buona coerenza interna in entrambe le popolazioni, con alpha di Cronbach uguale o superiore a ,88. Un'analisi fattoriale esplorativa è stata condotta, usando il metodo degli assi principali, sui dati degli individui della popolazione non clinica, separatamente per le scale relative alla figura materna e paterna, seguito da una rotazione varimax e scree test. L'Analisi Fattoriale Confirmatoria condotta sul campione di pazienti supporta il modello a tre fattori, garantendo i migliori indici. La convergenza tra EFA e CFA in campioni diversi ha supportato la validità strutturale della PMR e replicato la struttura fattoriale, per i risultati delle scale della figura paterna, χ^2=725, p<,001; df=402, CFI=0,92; TLI=0,91, SRMR=0,053, RMSEA=0,063, 90% CI [0,056, 0,07]; e della figura materna, χ^2=758, p<,001; df=374, CFI=0,89; TLI=0,88, SRMR=0,064, RMSEA=0,07, 90% CI [0,06, 0,07]. **Conclusioni.** Questo studio fornisce evidenze sulla validità della versione italiana della PMR per misurare retrospettivamente il maltrattamento psicologico infantile. Le tre scale della PMR (Abuso, Neglect e Supporto Psicologico) mostrano una buona coerenza interna. I risultati provano la validità di costrutto, in accordo con la letteratura corrente, suggerendo che l'abuso psicologico, il neglect e il supporto genitoriale siano costrutti dimensionalmente separati.

PAROLE CHIAVE: PMR, maltrattamenti sui minori, neglect, maltrattamenti psicologici, abuso sui minori.

INTRODUCTION

The American Professional Society on the Abuse of Children (APSAC), in the 1995, defined "psychological abuse" as every repeated caregiver behavior that convey to the child he is worthless, defective, damaged goods, unloved, unwanted, endangered, primarily useful in meeting another's needs and/or expendable[1]. Several researches indicated some psychologically abusive behaviors, such as continuing or excessive criticism, denigration, blaming, insulting and threatening[2,3]. Some of these behaviors, such as yelling, insulting and threatening, are common in the general population; the 45-86% of parents reported to engage them[4].

Psychological neglect was defined as "inadequate nurturance or affection" that may cause or increase the risk of emotional, mental or developmental difficulties[5-7]. Several studies indicated that early psychological neglect may result in immediate or later psychosocial difficulties[3,8-13] and may be considered as a risk factor for symptomatology.

Lastly, the *psychological support* was defined as «gestures or acts of caring, acceptance, and assistance that are expressed by a parent towards a child»[14].

All these forms of child maltreatment have been associated with an insecure attachment[9,15,16]. Several studies associated experiencing childhood psychological maltreatment, including psychological abuse, psychological neglect and lack of parental psychological support, to negative psychological outcomes, such as poor self-esteem, depression, anxiety, dissociation, aggressive behaviors, interpersonal and relational difficulties[2,17-19]. Parental support has been associated with academic achievement[20] intensified psychological and physical health[21], fewer post-traumatic symptoms after a natural disaster[22] and better social skills in romantic and sexual interactions during adolescence[23]. Longitudinal studies in the non-clinical population highlighted that the lack of parental support during the childhood is associated with the tendency to externalize problems and depressive symptoms[14,24].

Psychological abuse, neglect or nonsupport, when occur in the early childhood, may interfere with the development of a secure attachment to the caregivers[25], effecting the ability to form positive relationships with others[26,27].

The literature evidence suggested that children growing up in a harsh family environment present a high risk for poor outcomes in mental and physical health and show the tendency to adopt more risky behaviors, such as smoking, alcohol and drug abuse[7,28-33]. Repetti, Taylor, and Seeman[34] defined these families "risky families" and suggested that exposure to harsh or chaotic parenting during childhood may affect mental health outcomes in the adulthood via the influence on biological responses to stress, emotion-regulation skills and social competencies. These problems may stabilize, from adolescence to adulthood, into chronic negative affective states[35], internalizing symptoms, including social withdrawal and anxiety, or externalizing behaviors, such as aggressions and hyperactivity[36].

Although psychological maltreatment and interpersonal violence are very important for their implications on health and on the social functioning, few empirically validated and reliable instruments have been developed to measure these constructs[37-39].

Several instruments retrospectively assess childhood psychological abuse[40,41] less evaluate neglect[40] and no instruments investigate the parental psychological support, other than the unpublished Parental Psychological Support subscale of the Traumatic Events Scale (TES)[42], that also assess psychological maltreatment separately for the experiences with each caregiver. Furthermore, no instruments measure at the same time all the three constructs, parental psychological abuse, neglect, and support.

The Psychological Maltreatment Review (PMR), introduced by Briere at al.[16], is a self-report questionnaire assessing adults' childhood experiences, before the age of 18, of psychological abuse, psychological neglect, and parental psychological support, evaluating separately the most significant male and female parental figures in respondent's life. This instrument was intended to permit the researchers and the clinicians to evaluate simultaneously the presence of childhood psychological abuse, neglect, and nonsupport; to investigate the role and prevalence of maternal vs paternal psychological maltreatment; and to test the validity of psychological support as independent predictor of clinical outcomes.

The aim of the current study was to evaluate the construct validity and the Internal consistence of the Italian version of the PMR, and to assess the concurrent validity to provide adequate and reliable instruments to measure retrospectively child psychological maltreatment in the Italian population.

METHODS

Participants

The participants to our study were 209 patients and 217 non-clinical subjects.

The first group consisted in 209 adult patients, 106 males and 103 females (mean age of 41.43 years; SD=12.34), consecutively admitted at the psychiatric unit of the L'Aquila San Salvatore Hospital in the period from December 2016 to November 2017. The inclusion criteria were meeting DSM criteria for any psychiatric diagnosis (Table 1) and age ranged between 18 and 65 years. The exclusion criteria were any comorbid neurologic disorder; significant substance abuse in the past 6 months or a lifetime history of substance dependence; intellectual disability; any medical illness associated with neurocognitive impairment; current pregnancy or lactation and inability to provide an informed consent.

The second group consisted in 217 non-clinical subjects, 96 males and 121 females (mean age of 36.38; SD=10.38) that completed an online survey, including the self-report version of the PMR and the RFQ.

Procedure

All subjects were invited to answer to Sociodemographic Information Form and to take a self-report battery composed by two instruments: the PMR and the Risky Families Questionnaire (RFQ).

The PMR[16] is a self-report questionnaire administered to adults that investigate childhood experiences, up to 18 years of age, of psychological abuse, psychological neglect and psychological support, separately for each caregiver. The questionnaire is subdivided into three subscales, each evaluating one of the constructs; it is composed by 30 items, with answers on a 7 points Likert scale, rated on a scale from 0 (never) to 6 (more than 20 times a year).

The PMR was translated in Italian, from the original English version, following a precise translation protocol based on international standards.

At first, the PMR was translated in Italian by two professional translators, and then a reconciled version was elaborated by an independent translator, who identified and solved any inadequate expression or discrepancies between the two forward translations. Then, a professional translator, different from the translators who performed the original English-to-Italian translation and with no knowledge of the English original scale, translated the reconciled version back into English. This back-translation was compared to the original version by a panel of experts to verify the equivalence of the two English versions in terms of meaning and conceptual content. The two versions resulted equivalent, thus the last Italian version of the PMR was considered final. The translated instrument was then pre-tested on 10 patients to assess their understanding of the questions. No major issues were found during the pre-testing phase, thus the final joint translation was carried out, named PMR Italian version.

The Risky Families Questionnaire (RFQ) - Italian version[43] is a self-report instrument that retrospectively measures the severity of adverse childhood experiences from age 5 through 15. It has been adapted from an instrument originally developed to assess the relation of family distress with mental and physical health outcomes in adulthood. The instrument is aimed at rating the degree of harsh early family environment, characterized by conflict and aggression and by cold, unsupportive, and neglectful relationships. It consists of 13 items with responses on a 5-point Likert scale. The three subscales of Abuse (2 questions), Neglect (3 questions), and Chaotic Home Environment (4 questions) were proposed by Crowell et al.[44]. The validity of this scale has been demonstrated through corroboration with in-person interviews. The 13 items from this scale demonstrated high internal reliability, >=.89.

Data analysis

Descriptive statistics were computed. Cronbach's alpha was calculated in order to assess the internal consistency reliability of the scale and its factors.

A 2 (sample) × 2 (gender) MANOVA was performed on the six scales of the PMR to examine potential samples and gender differences in experiences of psychological abuse, neglect, and support.

An Exploratory Factor Analysis (EFA) was conducted to identify the factor structure using a principal components analysis with varimax rotation on the non-clinical subjects' sample. The suitability of applying EFA was verified using Kaiser-Meyer-Olkin (KMO) statistic and Bartlett's sphericity test, considering values >.70 for the KMO index and a significance of $p<0.05$ for Bartlett's sphericity test. Factor retention was according to Kaiser's criterion (i.e., retention for factors above eigenvalue 1).

Confirmatory Factor Analysis (CFA) using Analysis of Moment Structures (AMOS), Version 5.0 was then conducted on the patient sample. The CFA was used to confirm the exploratory model and determine the goodness of fit between the hypothesized model and the sample data.

The goodness of fit indices used to assess the degree of fit between the model and the sample were: Comparative Fit Index (CFI), Tucker Lewis Index (TLI), Standardized Root Mean Square Residual (SRMR) and Root Mean Square error of approximation (RMSEA).

The relationship between PMR factors and total scores, and demographics and clinical variables have been investigated using bivariate correlations. Bonferroni correction was used to control for type I error due to multiple comparisons. The significance level for the correlations was therefore set at $p<.01$.

ETHICS

This research was conducted in accordance with the Declaration of Helsinki and was approved by the Ethical Committee of the University of L'Aquila. All the procedures were carried out with the adequate understanding of the subjects, who read and signed an informed consent form after receiving a detailed explanation of this study. The privacy rights of all subjects were observed. All the authors declare that no financial support was received for this study.

RESULTS

Demographic and clinical characteristics of patients and individuals of general population were summarized in Table 1.

The non-clinical subjects have a lower mean age and higher educational level than the patient's group. Furthermore, the non-clinical group present a higher percentage of married participants (χ^2=39.57; p>.0001) and a greater percentage of employed (χ^2= 97.85; p>.0001).

The mean (SD) RFQ scores in the non-clinical subjects group were: total score 24.61 (7.7), Abuse subscale 3.28 (1.7), Neglect subscale 14 (5.9), Chaotic environment subscale 6.69 (2.7); in the patients' sample were: total score 32.16 (12.7), Abuse subscale 4.61 (2.5), Neglect subscale 7.79 (3.5), Chaotic environment subscale 9.68 (4.7).

Table 1. Demographic and clinical characteristics.

		Patients (n. 209)		Non-clinical subject (n. 217)	
		mean	**SD**	**mean**	**SD**
Age		41.43	12.34	36.38	10.38
Education level (years)		12.00	3.92	16.16	3.41
Years of illness		14.20	11.02		
		n	**%**	**n**	**%**
Sex	Male	106	50.7	96	44.2
	Female	103	49.3	121	55.8
Civil Status	Single	123	58.9	119	54.8
	Married/ cohabitabt	45	21.5	91	41.9
	Separated/ divorced or widowed	41	19.6	7	3.2
Job	Unemployed	112	53.6	22	10.1
	Employed	54	25.8	135	62.2
	Miscellaneous	43	20.6	60	27.6
Diagnosis	Schizophrenia spectrum	93	44.5		
	Mood disorders	71	34.0		
	Personality disorders	45	21.5		

Means and standard deviations for the PMR are presented in Table 2.

A 2 (sample) × 2 (gender) MANOVA was performed on the six scales of the PMR to examine potential gender differences in experiences of psychological abuse, neglect, and support. Using Wilks's criterion, multivariate effects were observed for samples, $F(6,426)=11.202$, p<.0001, but not for Gender , $F(6, 426)=1.57$, p=.53, and a Gender × Sample interaction $F(6, 426)=0.693$, p=.65. Post-hoc univariate analyses indicated that the non-clinical population reported lower levels of maternal and paternal neglect and abuse (Table 2).

Internal consistency reliability analyses were performed separately for the two samples, as shown in Table 3, all the scales had very good internal consistency in both samples, with Cronbach's alpha coefficients equal or greater than .88, with no items whose exclusion increased the overall reliability value.

An EFA was performed, using exploratory principal axis factoring, on the data of individuals from the non-clinical sample, separately for paternal and maternal scales, followed by a varimax rotation and scree testing[45,46].

Examination of the scree plot indicated three factors, Psychological abuse, Psychological neglect and Psychological support, for both mother (Kaiser-Meyer-Olkin value of .93 and a Bartlett's Test of Sphericity of 4667.739, p<.0001 and father-related analyses (Kaiser-Meyer-Olkin value of .93 and a Bartlett's Test of Sphericity of 4855.980, p<.0001). These factors were associated with substantial eigenvalues (12.6, 4.0, and 1.8 for paternal maltreatment, and 12.4, 3.9, and 1.9 for maternal maltreatment), explaining 61.7% and 61.2% of the variance, respectively (Table 4).

The CFA was performed on the data of the patients' sample, separately for paternal and maternal scales, supported a three factor model yielding the best fit indexes, both for paternal scales, $\chi^2=725$, p<.001; df=402, CFI=0.92; TLI=0.91, SRMR=0.053, RMSEA=0.063, 90% CI [0.056, 0.07]; and maternal scales, $\chi^2=758$, p<.001; df=374, CFI=0.89; TLI=0.88, SRMR=0.064, RMSEA=0.07, 90% CI [0.06, 0.07]. To confirm the appropriateness of the multifactorial model, a single-factor model has been tested, wherein psychological abuse, neglect, and non-support were all hypothesized to load on the same dimension. As expected, the single-factor solution provided a poor fit to the data for maltreatment by fathers, $\chi^2=1402$, p<.001; df=405, CFI=0.74; TLI=0.72, SRMR=0.101, RMSEA=0.111, 90% CI [0.10, 0.12]; and for maltreatment by mothers: $\chi^2=1672$, p<.001; df=405, CFI=0.66; TLI=0.63, SRMR=0.124, RMSEA=0.123, 90% CI [0.11, 0.13] (Table 5).

As shown in table 6, Pearson product moment correlations indicated that PMR paternal and maternal scales were all strongly related to RFQ total and subscales scores. Psychological abuse and neglect showed a positive relation with RFQ total score and Abuse subscale, Neglect subscale, Chaotic environment subscale, while Psychological support scales were negatively related.

Table 2. Patient and non-clinical subject Differences on the PMR Scales.

	Patients		General Population		
PMR	**mean**	**SD**	**mean**	**SD**	**F**
Paternal psychological abuse	18.94	16.47	9.87	9.48	26.13**
Maternal psychological abuse	18.25	15.76	11.56	11.11	47.56**
Paternal psychological neglect	19.18	18.61	9.09	13.53	46.2**
Maternal psychological neglect	16.82	17.39	7.04	11.29	41.35**
Paternal psychological support	31.86	16.81	35.55	16.15	NS
Maternal psychological support	36.82	16.4	42.00	13.77	NS

**p>.001

Table 3. Internal Consistency Reliability (Cronbach's Alpha) of the PMR Scales.

PMR Scales	Patients	General Population
Paternal psychological abuse	0.91	0.91
Maternal psychological abuse	0.88	0.92
Paternal psychological neglect	0.94	0.93
Maternal psychological neglect	0.94	0.93
Paternal psychological support	0.91	0.89
Maternal psychological support	0.93	0.89

DISCUSSION

The PMR is a retrospective instrument to assess child maltreatment, including the dimensions of psychological abuse, psychological neglect and non-support. This study provides evidence on the appropriateness of the Italian version of the PMR as retrospective measure of childhood psychological maltreatment.

Recent studies[47] revealed that gender may play an important role as moderator of the relationship between child abuse and depression, suggesting that females who experienced childhood abuse obtain higher scores on depression rating scales, than males. A recent study[48] suggested that also neglect and unreliable parenting present differences between genders; female subjects, compared to males, reported more adversities (59.0% vs. 47.6%) and indicated neglect and parental death as more important experiences, on the contrary, male subjects reported parental mental disorders. In our samples, contrary to these findings[16,47,48], no significant gender differences have been found between males and females in the rates of psychological maltreatment; these results are consistent with the findings of other retrospective studies on the adult population[49-51].

A growing body of literature demonstrated an association

Table 4. Principal Component Exploratory Factor Analysis. Rotation Promax of the PMR (n. 217): extraction of 3 factors.

	Psychological abuse		**Psychological neglect**		**Psychological support**	
PMR Items	**P**	**M**	**P**	**M**	**P**	**M**
1. Yelled at you	**0.783**	**0.869**	-0.233	-0.197	0.201	-0.064
4. Insulted you	**0.824**	**0.661**	-0.008	-0.051	-0.066	0.137
7. Criticized you	**0.862**	**0.828**	-0.115	0.028	0.001	-0.052
10. Said mean things about you	**0.493**	**0.632**	0.313	0.241	0.067	0.002
13. Called you names	**0.440**	**0.651**	0.228	0.116	0.045	0.057
16. Said you were stupid	**0.869**	**0.834**	-0.048	-0.069	-0.030	0.028
19. Made fun of you	**0.542**	**0.731**	0.037	0.037	-0.040	0.040
22. Tried to make you feel guilty	**0.592**	**0.726**	0.240	0.109	-0.044	-0.029
25. Ridiculed or humiliated you	**0.606**	**0.517**	0.196	0.410	-0.072	-0.019
28. Embarrassed you in front of people	**0.471**	**0.441**	0.263	0.324	-0.018	-0.021
2. Left you alone for long periods of time when they shouldn't have	0.069	-0.184	**0.685**	**0.880**	0.069	0.061
5. Acted like they didn't seem to care about you	0.138	0.352	**0.816**	**0.556**	0.021	-0.047
8. Ignored you	0.063	0.347	**0.745**	**0.489**	-0.052	-0.084
11. Didn't do things for you that they should have	0.041	0.094	**0.898**	**0.778**	0.104	-0.044
14. Acted like you weren't there, even though you were	0.304	0.337	**0.530**	**0.497**	-0.070	0.000
17. Weren't around when you needed them	-0.099	-0.102	**0.902**	**0.926**	-0.064	0.029
20. Didn't do things they said they would do for you	0.065	0.170	**0.817**	**0.720**	0.165	0.087
23. Let you down	-0.012	0.149	**0.828**	**0.738**	0.001	0.000
26. Didn't seem to love you	0.030	0.315	**0.738**	**0.564**	-0.165	-0.115
29. Didn't take care of you when they should have	-0.234	-0.082	**0.955**	**0.876**	0.021	0.102
3. Were on your side when things were bad	0.032	0.253	-0.205	-0.345	**0.706**	**0.650**
6. Praised you when you did something good	-0.066	-0.116	-0.021	0.149	**0.780**	**0.824**
9. Said they loved you	-0.120	-0.236	0.205	0.251	**0.887**	**0.838**
12. Did things that let you know they loved you	0.046	0.140	-0.325	-0.366	**0.640**	**0.633**
15. Hugged you	-0.070	-0.129	0.132	0.204	**0.904**	**0.871**
18. Took you places or did things with you	0.131	0.276	-0.082	-0.300	**0.729**	**0.566**
21. Encouraged you to have friends	-0.016	-0.177	0.171	0.325	**0.793**	**0.735**
24. Tried to make you feel better when you were upset or hurt	-0.070	0.095	-0.056	-0.074	**0.782**	**0.826**
27. Talked to you	0.071	0.093	0.059	-0.112	**0.827**	**0.760**
30. Helped you with homework or other things you had to do	0.144	0.137	-0.042	-0.125	**0.735**	**0.597**
% variance explained	42.130	41.680	13.500	13.190	6.030	6.360
Cronbach's Alphas	0.880	0.910	0.940	0.940	0.930	0.910

Table 5. Fit indices for the one, two and three factors models of the PMR Items.

Factors	X^2	df	CFI	SRMR	RMSEA	Hi_{90}	Low_{90}
Paternal psychological maltreatment							
1	1402	405	0.74	0.1	0.11	0.1	0.12
2	861	404	0.88	0.05	0.07	0.06	0.08
3	725	402	0.92	0.05	0.06	0.05	0.07
Maternal psychological maltreatment							
1	1672	405	0.66	0.12	0.12	0.11	0.13
2	699	298	0.86	0.07	0.08	0.07	0.08
3	758	374	0.89	0.06	0.07	0.06	0.07

df=degrees of freedom; CFI=comparative fit index, SRMR=standardized root mean square residual; RMSEA=point estimate of Steiger's root mean square error of approximation; HI90 and LO90=upper and lower ends of the 90% confidence interval of the RMSEA.

Table 6. Correlations between PMR subscales and Risky Families Questionnaire scores.

	Risky Families Questionnaire			
	Total score	**Abuse**	**Neglect**	**Chaotic environment**
Psychological Maltreatment Review				
Paternal psychological abuse	.682*	.681*	.491*	.599*
Maternal psychological abuse	.588*	.538*	.433*	.503*
Paternal psychological neglect	.754*	.656*	.609*	.669*
Maternal psychological neglect	.668*	.536*	.621*	.570*
Paternal psychological support	-.474*	-.361*	-.518*	-.384*
Maternal psychological support	-.389*	-.235*	-.564*	-.240

**Bonferroni correction*: the significance level for the correlations has been set at p<.01.
*p<.001 (2-tailed).

between child maltreatment and mental diseases[52], such as mood and anxiety disorders, substance abuse[53,54] and personality disorders[55-58]. A recent study[59] suggested that personality disorders were associated with higher levels of interpersonal violence, both perpetration and victimization and that females were exposed to higher degree of victimization in childhood and adulthood, compared to males, whereas males were more involved in the perpetration of violence in childhood. Some studies[60,61] associated bipolar disorder and experiences of abuse and neglect in childhood, revealing that in bipolar patients the emotional abuse is the most frequently reported trauma, 37%[60]. Recent studies suggested that child maltreatment may be related to depression in adult life. Emotional abuse, particularly, seem to be associated with depressive symptoms, subjects who experienced an emotional abuse reported higher scores on the self-report depression inventories[62]. Consistently with the literature, in our study, the univariate analysis results indicated that non-clinical subjects reported lower levels of maternal and paternal neglect and abuse, and higher levels of maternal and paternal support than patients. Furthermore the non-clinical subjects present a higher percentage of married participants and of employed individuals. Although speculatively, these results may suggest, according to the recent literature's findings, a relation between lower levels of maternal and paternal abuse and neglect, higher levels of maternal and paternal support and better self-esteem, academic achievement[20] minor interpersonal and relational difficulties[2,17-19] and better social skills in romantic and sexual interactions[23]. Further studies are needed to clear up the relationship between child abuse, neglect, non-support and self-esteem, achievements and social functioning in the Italian population.

The three PMR scales (psychological abuse, psychological neglect and psychological support) demonstrated good internal consistency with average alpha coefficients, equal or greater than .88. The findings provide evidence of the construct validity, according to the literature[16], suggesting that psychological abuse, psychological neglect and parental support are dimensionally separated constructs, as defined in the literature.

One of the strengths of this study was that two separate statistical evaluations of the PMR structure have been performed in two different samples: the EFA and the CFA. The CFA performed on the patient' sample supported a three factor model yielding the best fit indexes. The convergence of the EFA and the CFA in different samples supported the structural validity of the PMR and replicated its factorial structure, for both maternal and paternal ratings.

One of the limitations of the current study is that the participants of the patient's group may be biased in answering the questions, indicating higher levels of abuse, neglect and non-support as a result of depressed mood. Another limitation is the high educational level of the non-clinical population, that may reduce the generalizability of these results.

Another limitation of this study is in the recruitment of the participants; the subjects of the second group were recruited via internet. The online subjects may have been interested in psychology or may have been self-selected for their own child maltreatment history. These conditions could result in a bias of answer.

Further studies should investigate, in the Italian population, the relation between psychological abuse, neglect, non-support, attachment categories and the consequences in the relationship development in adulthood.

Our study represents an advance in the use of adequate and reliable instruments to assess retrospectively child psychological maltreatment in the Italian population.

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