
PSYCHOMETRIC PROPERTIES OF THE ITALIAN VERSION OF THE INTERPERSONAL SENSITIVITY MEASURE (IPSM)

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Abstract

The Interpersonal Sensitivity Measure (IPSM) is used to assess interpersonal sensitivity. This study explored the factor structure, internal consistency, and criterion validity of the Italian version of the IPSM (IPSM-It) in non-clinical emerging adults. 374 participants aged between 18 and 31 years (64.4% female; $M = 21.96$, $SD = 2.91$) were included in the study. They completed the IPSM, the Beck Depression Inventory-I, the Beck Anxiety Inventory, the State-Trait Anger Expression Inventory-II, and the Satisfaction with Life Scale. Confirmatory factor analysis indicated that the original structure of the measure did not fit the data well. An exploratory factor analysis was also conducted and the results supported a 27-item version of the IPSM and a three-factor structure (Interpersonal Worry and Dependency, Low Self-Esteem, and Unassertive Interpersonal Behavior). The IPSM-It showed good internal consistency and criterion validity. The IPSM-It appeared to be a reliable and valid measure for assessing IPS in Italian culture.

Keywords: interpersonal sensitivity, reliability, validity, assessment, emerging adults.

Interpersonal sensitivity (IPS), recently called “sensitivity to personal rejection” (Mohammadian et al., 2017) and “interpersonal rejection sensitivity” (Harb et al., 2002), was defined as an “*undue and excessive awareness of, and sensitivity to, the behavior and feelings of others*” (Boyce & Parker, 1989, p. 342).

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IPS is characterized as non-assertive behavior, vigilance about others' reactions, lower self-worth, and oversensitivity to others' behaviors, statements, and social feedback. The perception of interpersonal rejection and frequent misunderstanding of ambiguous social signals may result in discomfort and avoidance in social contexts. This also represents a risk factor for the development of several mental health problems, including depression (Boyce et al., 1992; Masillo et al., 2014; You et al., 2020) and social anxiety (Mohammadian et al., 2017).

The Interpersonal Sensitivity Measure (IPSM) is a 36-item self-report instrument developed by Boyce and Parker (1989) to assess IPS. Boyce and Parker (1989) conceptualized IPS as a multidimensional construct, including interpersonal awareness, need for approval, separation anxiety, fragile inner self, and timidity. *Interpersonal Awareness* reflects the tendency to be overly conscious in interactions with others (Boyce and Parker, 1989). High scores in this domain indicate a heightened vigilance of other's behavior, over concerns about other's responses as well as high levels of apprehension in interpersonal contexts. The *Need for Approval* dimension reflects the extent to which individuals prioritize others' needs over their own to please others (Boyce and Parker, 1989). Items in this factor assess the desire to please others, seek social approval, and maintain harmonious relationships in which only pleasant emotions occur. The *Separation Anxiety* domain refers to the degree of anxiety experienced when there is a separation from significant others, in line with Bowlby's attachment theory (1977). Higher levels in this domain indicate heightened sensitivity and concerns about any threat of damaging or losing significant interpersonal bonds. The *Fragile Inner Self* reflects self-esteem and self-worth domains, with high scores indicating the belief of being flawed and unlikeable. In particular, items in this domain assess an individual's concerns about disapproval and being rejected.

Finally, Boyce and Parker's (1989) conceptualization of IPS includes the *Timidity* dimension. It should be highlighted that, even though labelled "timidity", this dimension does not assess shyness phenomenology. The *Timidity* dimension of the IPS reflects a lack of ability to act assertively in interpersonal contexts. Indeed, items reflect the tendency to use a passive communication style and behave in a way that avoids conflicts in social interactions at the expense of one's feelings and needs. Although unassertiveness is closely related to social anxiety, these constructs are not equivalent. While social anxiety refers to enhanced physiological and emotional responses to social contexts, unassertiveness has been conceptualized as a behavioral strategy to avoid negative evaluations of others (Swee et al., 2018). Thus, unassertiveness may be viewed as a subgroup of the common fears of individuals with social anxiety (e.g., Swee et al., 2018).

Some studies examined the psychometric properties of the IPSM across different samples, including undergraduate students (Dogan & Sapmaz, 2012; Mohammadian et al., 2017; You et al., 2020), healthy adults (Lee et al., 2013), and clinical samples (Harb et al., 2002; Masillo et al., 2014). Some of these studies confirmed the five-factor structure of the IPSM (Mohammadian et al., 2017; You et al., 2020; Lee et al., 2013). Yet, Lee et al. (2013) used different names to label the five factors of the Korean version, since the factors had a different item composition as compared to Boyce and Parker's (1989) version. Some other studies found a three-factor structure (i.e., interpersonal worry and dependency, low self-esteem, and unassertive interpersonal behavior) after deleting some items (Dogan & Sapmaz, 2012; Harb et al., 2002).

Previous research also raised doubts about the internal consistency and construct validity of the "Need for Approval" dimension. In particular, Cronbach's alpha coefficients for this dimension ranged from .40 to .73 (Harb et al., 2002; You et al., 2020; Lee et al., 2013), and some findings suggested that several items of this dimension (i.e., items 6, 13, and 20) should be reversed for scoring since they were positively correlated with high self-esteem (Harb et al., 2002; Dogan & Sapmaz, 2012).

Masillo et al. (2014) adapted the 36-item IPSM to Italian and explored its internal consistency and concurrent validity in a sample of emerging adults and adolescents who have a high risk for psychosis. However, they did not investigate the factorial structure of the Italian version. Therefore, the purpose of this study was to further investigate the psychometric properties of the Italian version of IPSM (IPSM-It) in a non-clinical sample of Italian emerging adults. In particular, this study focused on the factorial structure, internal consistency, and criterion validity (i.e., the associations with measures of anxiety, depression, anger, and life satisfaction) of the IPSM-It.

Method

Participants

Table 1 shows the socio-demographic characteristics of the sample. The sample included 374 emerging adults, aged between 18 and 31 years ($M = 21.96$; $SD = 2.91$). Participants were predominantly female (64.4%) and currently engaged in a romantic relationship (61.8%). Most of the participants (88.5%) were either college students or graduated from college. 11.5% of the sample had a high school level of education. Lastly, 68.4% of the sample was unemployed.

Table 1. Socio-demographic characteristics of the sample.

	Range	M-SD
Age	18-31	21.96 - 2.91
	n	%
Gender		
Female	241	64.4
Male	131	35.0
Romantic relationship status		
Engaged	93	24.9
Not engaged	231	61.8
Education		
High school	43	11.5
College students or graduated	331	88.5
Employment		
Yes	118	31.5
No	256	68.4

Procedure

The present study was approved by the Committee on Bioethics of the University of Pisa (nr 6/2018). Recruitment took place in university halls before lectures or in public libraries in the provinces of Florence and Pisa. Participation was voluntary and did not include any form of compensation. Participants were informed about the purpose, anonymity, and confidentiality. All the participants filled in a questionnaire package in a paper-pencil format (described in detail in the following section, “Measures”). Self-report questionnaires following the socio-demographic information were presented in three randomly ordered packages, to reduce the risk of possible distortions in the answers related to the order of presentation.

Measures

Interpersonal Sensitivity. The Interpersonal Sensitivity Measure (IPSM; Boyce & Parker, 1989; Italian version by Masillo et al., 2014) includes 36 items rated on a 4-point Likert scale ranging from 1 (*Very unlike me*) to 4 (*Very like me*). The measure is composed of five subscales: interpersonal awareness, need for approval, separation anxiety, timidity, and fragile inner-self. Higher scores indicate greater interpersonal sensitivity. Internal consistency for the total score was 0.86 in depressed patients and 0.85 in a non-clinical student sample (Boyce & Parker, 1989).

Depression. The Beck Depression Inventory-I (BDI-I; Beck et al., 1961; Italian version by Scilligo et al., 1983) was used to measure depressive symptoms that occurred in the last week. This questionnaire includes 21 items rated with a graded series of four descriptive statements of increasing severity. Higher scores correspond to higher levels of depression. The instrument showed a high internal

consistency both in clinical and non-clinical samples and a good concurrent validity with other measures of depressive symptoms (Beck et al., 1988a). In the present study, Cronbach's alpha of the BDI-I was .86.

Anxiety. The Beck Anxiety Inventory (BAI; Beck et al. 1988b; Italian version by Sica & Ghisi, 2007) includes 21 items measuring anxiety-related symptoms in the last two weeks. Items are rated on a 4-point Likert scale. Higher scores indicate higher levels of anxiety. Previous research demonstrated the internal consistency, test-retest reliability, and ability of the scale to discriminate between clinical and non-clinical samples (Beck et al., 1988b). In the present study, Cronbach's alpha of the BAI was .89.

Anger Expression and Control. The State-Trait Anger Expression Inventory-II (STAXI-II; Spielberger, 2010; Italian version by Comunian, 2004) was used to measure the expression and control of anger. This self-report measure assesses both the amount of anger that individuals experience at the time of examination (State Anger) and their general tendency towards anger (Trait Anger). For this study, only the Trait Anger has been employed, which consists of 31 items that participants were required to rate on a Likert scale ranging from 1 (*not at all*) to 4 (*very much so*). The Trait Anger is divided into four subscales, which measure different aspects of anger expression and control: Anger Expression-Out (AE-O) measures the tendency to frequently engage in violent or aggressive behavior as a consequence of anger; Anger Expression-In (AE-I) indicates the propensity to experience intense angry feelings that are not translated in external actions; Anger Control-Out (AC-O) assesses how frequently the individual actively avoids to act out on behalf of his angry feelings; and lastly, Anger Control-In (AC-I) indicates the frequency of attempts to cool down and relax, instead of perpetuating internal thoughts and feelings of anger. High scores on the two Expression subscales indicate frequent aggressive behavior (AE-O) or frequent experiences of internal anger (AE-I), whereas high scores on the Control subscales denote more intense efforts to calm down (AC-I) or to avoid becoming aggressive (AC-O). In the present study, Cronbach alpha coefficients of the subscales ranged from .63 to .87.

Life Satisfaction. The Satisfaction with Life Scale (SWLS; Diener et al., 1985; Italian version by Di Fabio & Busoni, 2009) was used to assess perceived global life satisfaction. This questionnaire consists of 5 items, rated on a 7-point Likert scale ranging from 1 (*never true*) to 7 (*always true*). Higher scores indicate higher levels of life satisfaction. In the present study, Cronbach's alpha of the SWLS was .86.

Statistical Analyses

A confirmatory factor analysis (CFA) was performed to determine the fit of the original factor structure explored by Boyce and Parker (1989) to the data of this study. Specifically, CFA with maximum likelihood estimation and covariance

matrices were used. The adequacy of the five-factor model to the data was determined by using several a priori test statistics: ratios of chi-square to its degrees of freedom (χ^2/df) lower than 3, comparative fit index (CFI), Tucker Lewis Index (TLI), and Goodness of Fit Index (GFI) equal to or greater than .90, and root mean square error of approximation (RMSEA) and Standardized Root Mean Squared Residual (SRMR) equal to or lower than .05 (Byrne, 2016). Based on the results of CFA, an exploratory factor analysis (EFA) was also conducted. The principal axis factor (PAF) with varimax rotation was used to determine the IPSM-It factor structure. Internal consistency was assessed using Cronbach's alpha. Criterion validity was evaluated by calculating Pearson's correlation coefficients between the IPSM-It and measures of depression, anxiety, anger, and life satisfaction.

Results

Descriptive Statistics and Inter-Item Correlations

Descriptive statistics for each item were calculated. Item means ranged from 1.80 to 3.56, and their standard deviations ranged from 0.70 to 1.04. Only two items differed slightly from the normal distribution: Item 4 had a platykurtic distribution (with a kurtosis value of -1.10) and Item 18 had a leptokurtic distribution (with a kurtosis value of 1.04). Moreover, Item 18 also showed a skewness value of -1.22 , indicating an asymmetric distribution. The inter-item correlation matrix of IPSM-It was obtained to explore multicollinearity. Pearson correlation coefficients ranged from weak to moderate with no value greater than 0.8, suggesting no item redundancy.

Confirmatory Factor Analysis

CFA with maximum likelihood estimation and covariance matrices were used to test whether the original five-factor structure fits the data of this study. Results showed that the model did not fit the data ($\chi^2(584, N = 374) = 1935.072$, $\chi^2/df = 3.13$, CFI = .67, TLI = .64, GFI = .74, RMSEA = .08, SRMR = .10). All factor loadings except Item 13 and Item 20 on their own factors were significant, therefore the items with non-significant loadings were discarded from the model. CFA results indicated that the model did not fit the data ($\chi^2(517, N = 374) = 1644.595$, $\chi^2/df = 3.18$, CFI = .71, TLI = .68, GFI = .77, RMSEA = .08, SRMR = .10). The factor loadings ranged between .15 and .80 and their standard errors ranged between 0.07 and 2.00. Items' error variances on the same factor were correlated based on the suggested modification indices. Five sets of errors were correlated and included in the model (items 1 and 17, 21 and 32, 31 and 35, 6 and 18, 21 and 22). Following each correlation, an χ^2 difference test was performed (Tabachnick & Fidell, 2001).

Again, the final five-factor model did not fit the data well ($\chi^2(512, N = 374) = 1409.674$, $\chi^2/df = 2.75$, CFI = .77, TLI = .74, GFI = .80, RMSEA = .07, SRMR = .09).

Exploratory Factor Analysis

Since CFA results indicated that the five-factor model did not provide a good fit to the data of this study, an EFA was used to determine the factor structure of the IPSM among Italian emerging adults. Principal Axis Factor (PAF) with varimax rotation was applied. The value of the Bartlett test of sphericity ($\chi^2(630) = 4522.704$, $p < .001$) indicated that data were acceptable for further analyses. The Kaiser-Meyer-Olkin value was high (KMO = .87), suggesting that the sample size was sufficient to provide stable factor solutions (Field, 2000). Communalities showed that only Item 9 has a value lower than .02 and, hence, it was removed. PAF analysis indicated that all the items showed factor loadings greater than .30, except Item 8 and Item 19. Furthermore, the scree-plot of eigenvalues indicated a three-factor solution. An examination of the rotated factor loadings has led to a drop in several items, resulting in a 27-item version of the IPSM. Item 9 was dropped because it showed a low communality value. Item 16 was dropped because it showed a factor loading lower than .30. Items 3, 15, 33, 26, 25, and 31 loaded on two or more factors with a difference of less than 0.20 and were also dropped. Finally, Item 18 was dropped because of similar loadings on two factors and a low and negative item-total correlation value (-.06). IPSM-It accounted for 41.52% of the total variance and showed a good Cronbach’s alpha coefficient ($\alpha = .85$) (see Table 2).

Table 2. Three-Factor Solution: Rotated Factor Loadings (λ), Communalities (h^2), Item-Total Correlation (r_{it}), Squared Multiple Correlation (R^2) and Cronbach’s Alpha.

Item	λ			Total	h^2	r_{it}	R^2	α if item is deleted
	Factor 1	Factor 2	Factor 3					
30	.65				.54	.61	.54	.83
34	.64				.47	.51	.47	.84
10	.63	.31			.54	.66	.54	.83
23	.61				.43	.54	.43	.84
12	.58				.36	.47	.36	.84
17	.57				.52	.45	.52	.84
2	.55				.37	.42	.37	.84
36	.53				.33	.34	.33	.84
28	.48				.30	.43	.30	.84
35	.45				.38	.50	.38	.84
1	.45				.46	.35	.46	.84
19	.41				.27	.40	.27	.84
8	.38				.28	.28	.28	.85

Item	λ			Total	h^2	r_{it}	R^2	α if item is deleted
	Factor 1	Factor 2	Factor 3					
11	.35				.23	.25	.23	.85
5		.74			.58	.50	.58	.84
27		.67			.41	.34	.41	.84
24		.66			.51	.45	.51	.84
29		.59			.42	.49	.42	.84
4		.52			.30	.38	.30	.84
20*		-.50			.29	.18	.29	.85
13*		-.48			.34	.35	.34	.84
6*		-.34			.17	.06	.17	.85
7			.65		.40	.39	.40	.84
21			.61		.34	.02	.34	.86
32			.59		.30	.18	.30	.85
22			.58		.34	.35	.34	.84
14			.41		.25	.34	.25	.84
% Variance	22.46	11.08	7.98	41.52				
Cronbach's alpha	.85	.80	.71	.85				

*reverse items

Every one of the 27 items loaded on one single factor ($> .30$) with the only exception being represented by Item 10, which loaded onto two factors with a difference greater than $.20$. Communality values were $\geq .20$ for each item, with a single exception of Item 6 ($.17$). Corrected item-total correlations were greater than $.30$, except for the items 20, 6, and 21. Squared multiple correlations were greater than $.10$ for each item.

The first factor accounted for 22.46% of the variance and consisted of 14 items. In the original version of the IPSM, among these items, six were included in the Interpersonal Awareness subscale, three in the Need for Approval subscale, four in the Separation Anxiety subscale, and only one in the Fragile Inner Self subscale. Following Harb et al. (2002) and Dogan and Sapmaz (2012), we chose to label the first factor as *Interpersonal Worry and Dependency* (IWD).

The second factor accounted for 11.08% of the variance and included 8 items. Among these items three were originally included in the Fragile Inner Self subscale, three were in the Need for Approval subscale, one was in the Separation Anxiety subscale, and one was in the Interpersonal Awareness subscale. Furthermore, the three items from the Need for Approval subscale showed a negative loading on the second factor. For this reason, the scoring of items 6, 13, and 20 was reversed in subsequent analyses. Following Harb et al. (2002) and Dogan and Sapmaz (2012), we labeled the second factor as *Low Self Esteem* (LSE).

The third factor accounted for 7.98% of the total variance and consisted of 5 items, all of which were originally included in Boyce and Parker's (1989) Timidity

subscale. We labelled the third factor as *Unassertive Interpersonal Behavior* (UIB; Harb et al., 2002; Dogan & Sapmaz, 2012).

Criterion validity

Descriptive statistics and Pearson correlation coefficients between the IPSM-It scores and the study variables are presented in Table 3. IWD and LSE significantly correlated with all the variables. The only exception was the correlation between IWD and External Anger Control which did not reach statistical significance ($p > .05$). Correlation coefficients ranged from weak to moderate. UIB was significantly correlated with External Anger Expression ($r = -.37, p < .001$), External Anger Control ($r = .42, p < .001$), and Internal Anger Control ($r = .20, p < .001$). The total score of the IPSM-It was correlated with all the variables, except External Anger Expression and External Anger Control ($ps > .05$).

Table 3. Descriptive Statistics and Pearson Correlation Coefficients Between the IPSM-It Scores and the Variables in the Study.

	IWD	LSE	UIB	<i>M</i>	<i>SD</i>	Cronbach's α
Depression	.37***	.59***	.09	9.11	7.68	.86
Anxiety	.41***	.40***	.05	13.26	9.70	.89
AE-O	.13*	.20***	-.37***	15.26	3.52	.63
AE-I	.39***	.50***	.11*	19.13	4.78	.77
AC-O	-.09	-.13**	.42***	22.25	3.93	.76
AC-I	-.14**	-.24***	.20***	22.90	4.78	.87
Life Satisfaction	-.24***	-.51***	-.00	23.07	6.00	.86
<i>M</i>	39.23	16.04	12.36	-	-	-
<i>SD</i>	7.07	4.38	2.94	-	-	-

Note. IWD: IPSM Interpersonal Worry and Dependency subscale; LSE: IPSM Low Self-Esteem subscale; UIB: IPSM Unassertive Interpersonal Behavior subscale; AE-O: External Anger Expression; AE-I: Internal Anger Expression; AC-O: External Anger Control; AC-I: Internal Anger Control

Note. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Reliability Analysis

Cronbach's alpha coefficients for the total score, IWD, and LSE were high (respectively $\alpha = .88, .85$, and $.80$). UIB showed an acceptable Cronbach's alpha value ($\alpha = .71$). Inter-correlations among the factors showed that IWD was significantly correlated with LSE ($r = .32$) and UIB ($r = .25$). The correlation between LSE and UIB was not statistically significant.

Discussion

The purpose of this study was to examine the psychometric properties of the IPSM in a non-clinical sample of Italian emerging adults. Investigation of the psychometric properties of IPSM-It can help to further facilitating research on IPS, expanding its cross-cultural use, allowing cross-cultural comparisons, and assisting clinical practice. Moreover, previous research has raised important questions about the factorial structure of the IPSM that deserve further research.

Results of a CFA with a five-factor structure of the IPSM-It revealed that this model did not fit the data sufficiently in the sample of Italian emerging adults. Thus, our results did not support the original five-factor structure (Boyce & Parker, 1989) of the scale. Rather, our results support a three-factor structure, in line with findings on the Persian (Harb et al. (2002) and Turkish versions (Dogan and Sapmaz, 2012) of the IPSM. Differences across sociocultural contexts include differences in interpersonal relations (Albert & Trommsdorff, 2014), which might reflect differences in the variability and interdependencies among the items. Considering that the item composition of our dimensions was very similar to those found by Harb et al. (2002) and Dogan and Sapmaz, (2012), we preferred to use the same labels, which are *Interpersonal Worry and Dependency* (IWD), *Low self-esteem* (LSE), and *Unassertive Interpersonal Behavior* (UIB).

Individuals with high levels of IWD may give great importance to others' judgments and opinions about themselves since their value appears to be externally defined. This dependency on interpersonal evaluation also implies the need of keeping significant others close. These aspects are well represented by the Italian version of items such as "*I care about what people feel about me*" and "*I worry about losing someone close to me*". Items of LSE reflect low self-esteem and self-image, feeling unliked by others, and anticipating criticisms from others. This factor is well represented by the item "*If others knew the real me, they would not like me*". Items of UIB reflect the tendency to give up on personal needs and preferences to avoid upsetting others or stepping on their toes. The item "*I will do something I don't want to do rather than offend or upset someone*" well exemplifies such unassertive interpersonal style. It should be noted that Item 21 ("*I find it hard to get angry with people*") showed the lowest item-total correlation value and, if deleted, the total Cronbach's alpha would slightly increase. Even though this item may be problematic, we decided to include it in the IPSM-It. In particular, Item 21 may measure an internal experience of anger, regardless of an individual's inclination to manifest it assertively. Individuals may respond to this item regardless of their level of UIB. Specifically, individuals with high levels of UIB may rate low on this item by not finding it hard to get angry with others per se, but they may avoid manifesting external anger. Thus, we suggest rephrasing Item 21 to "*Even if people make me*

*angry, I find it hard to express it to them** “ to make the item more coherent with the measured construct. Nevertheless, future studies with different sample groups are needed to further explore the factorial structure of the IPSM-It.

The reliability of the IPSM-It is satisfactory. Specifically, the internal consistency was high for the IWD and LSE subscales. Internal consistency for the UIB was lower, probably because this subscale has a small number of items ($n = 5$), but still acceptable and consistent with previous studies reporting on a three-factor structure (Harb et al., 2002; Dogan & Sapmaz, 2012).

The results from this study support the criterion validity of the IPSM-It. In line with previous studies, IWD and LSE dimensions showed positive correlations with both depression and anxiety (Boyce et al., 1992; Dogan & Sapmaz, 2012; Masillo et al., 2014; Mohammadian et al., 2017, 2018; You et al., 2020), indicating that individuals with higher levels of worry about interpersonal relations, fear of others' opinions and responses, low self-esteem, and fear of criticism are more likely to report on depression and anxiety symptoms.

The results from this study also showed that the UIB dimension does not correlate either with depression or anxiety. These results seem to be in contrast with previous research suggesting that IPS constitutes an important factor for the development and maintenance of depression (Boyce et al., 1992), and low assertiveness is an indicator of depression (Weissman & Paykel, 1974). However, they are in line with findings reported by Dogan and Sapmaz (2012) and suggest that there may be differential associations of the IPSM dimensions with diverse depressive symptoms. While ISD and LSE dimensions seem to be more important for depression, unassertive behavior seems to play a less important role.

Similarly, the timidity subscale of the IPSM is related to agoraphobia and simple phobia, whereas the subscale of separation anxiety is associated with agoraphobia, panic disorder, and generalized anxiety disorder (Wilhelm et al., 2004), which indicates that IPSM subscales might have differential associations across anxiety disorders (Harb et al., 2002). Taken together, these findings suggest that the role of the multidimensional IPS construct in increasing depression and anxiety symptoms needs further attention.

The IPSM-It also proved concurrent validity with measures of anger expression and control. Findings suggest that individuals with higher interpersonal sensitivity might be more inclined to feel or control anger, as they frequently feel threatened by other's evaluations, and those threats appear even more reinforcing because of their low self-esteem. Anger may also be activated by the perception of negative evaluation and low self-esteem (Dadds et al., 1993). Yet, it may enhance the real or perceived risk of more criticism, negative evaluations, and negative feedback.

* In Italian version “Anche se gli altri mi fanno arrabbiare, trovo difficile arrabbiarmi con le persone”.

Furthermore, in line with Harb et al. (2002), the IWD and LSE subscales were negatively related to life satisfaction. More precisely, a less positive attitude towards oneself, weaker self-worth, and giving great importance to others' opinions are associated with lower levels of life satisfaction. Furthermore, there was no correlation between life satisfaction and the UIB subscale. Considering assertiveness as a facet of personality, previous studies highlighted gender differences in the relation between assertiveness and life satisfaction. Specifically, life satisfaction was related to positive emotionality in females, whereas assertiveness was a significant predictor of life satisfaction in males (Herringer, 1998; Schimmack et al., 2004). Further studies are needed to explore the role of gender in the relationship between IPSM-It dimensions, especially unassertiveness, and life satisfaction.

This study has some limitations. First, the utilization of only self-report questionnaires has some disadvantages such as social desirability, lack of self-awareness, and common method variance biases. Future research should include different types of measurements like behavioral observations of interpersonal behaviors in the context of social rejection. Second, the sample in this study reflected a convenience sampling method and exclusively consisted of emerging adults, who were mostly female and undergraduate students. Therefore, the generalizability of the results is limited. The psychometric properties of IPSM-It should be further examined in more heterogeneous non-clinical samples. Third, other psychometric properties of the IPSM-it deserve attention in future research, such as the test-retest reliability, the invariance of the factorial structure across clinical and non-clinical samples, and the treatment sensibility. Further, the moderating role of variables such as the relationship status to explain the relation of IPS with negative psychosocial outcomes warrants future research. In this regard, and even though literature is scarce, several studies suggest that IPS may moderate the relationship between romantic stress and depression (Rizzo et al., 2006), on one hand, and between spousal conflict and negative affect, on the other hand (Smith and Zautra, 2001).

In conclusion, the IPSM-It showed good psychometric properties and proved to be a useful tool for the investigation of IPS. Nevertheless, our findings did not support the five-factor structure proposed by Boyce and Parker (1989) for the IPSM, but the three-factor solution found by other authors (Dogan and Sapmaz, 2012; Harb et al., 2002). Our findings also proved the internal consistency and criterion validity of the IPSM-It.

Authors' Notes

Conflict of Interest. On behalf of all authors, I hereby declare that there are no potential conflicts of interest associated with this publication.

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Publication Ethics. This study was performed in line with the principles of the 1964 Declaration of Helsinki and its later amendments (2001). Approval was granted by the Institutional Review Board of the Pisa University. The 2016 American Psychological Association Ethical Principles of Psychologists and Code of Conduct (APA, 2017) was also applied. Informed consent was obtained from all individual participants included in the study.

Authorship. LC has contributed to the writing of the introduction and contributed to data collection. CA-A has contributed to the data analysis and the drafting of method and results sections of the manuscript. GT has contributed to the data collection. OB and FR and MS have selected the sample and supervised data collection. Moreover, they contributed in interpretation of results. CB has supervised the design and drafting the discussion section of the manuscript. All authors revised the final version of manuscript.

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