

NAVIGATING PEER INCLUSION AND EXCLUSION: PATHOLOGICAL NARCISSISM, REFLECTIVE FUNCTIONING, AND REJECTION-RELATED EMOTIONS IN ADOLESCENTS

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Abstract

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Objective: This study aims to explore the interplay between pathological narcissism, reflective functioning (RF), and peer exclusion (vs. inclusion) among adolescents. The study hypothesizes that peer exclusion (vs. inclusion) is associated with greater post-task difficulties in reflective functioning and higher rejection-related emotions, and tests whether these associations vary as a function of pathological narcissism.

Method: A sample of 204 adolescents (aged 14-18) participated in an experimental task simulating social media interactions using the Social Media Ostracism Paradigm (SMOP). Participants were assigned to one of three experimental conditions: Over-Inclusion (OI), Neutral (N), and Over-Exclusion (OE). Pathological narcissism was assessed using the Pathological Narcissism Inventory (PNI), and reflective functioning and rejection-related emotions were evaluated post-task.

Results: High-risk narcissistic adolescents exhibited significantly lower RF scores than their low-risk peers ($F(1, 198) = 13.72, p < .001$), particularly in the OE condition ($F(2, 198) = 6.76, p < .001$). Low-risk adolescents in the OI condition demonstrated better RF. Social exclusion significantly impacted rejection-related emotions ($F(2, 198) = 13.890, p < .001$), with OE participants reporting higher distress than N and OI groups. However, narcissism did not significantly moderate emotional responses.

Conclusions: Pathological narcissism was associated with greater RF difficulties, which were most evident under exclusion. However, rejection distress appears to be a broadly shared response in adolescence and may function as a normative signal of threatened belongingness, relatively independent of narcissism levels. These results emphasize the importance of targeted interventions focusing on mentalization and peer dynamics, particularly for adolescents with high-risk narcissism traits.

Key words: pathological narcissism, reflective functioning, peer rejection, adolescence, social inclusion

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Introduction

Adolescence represents a vital stage for the formation and consolidation of personality and identity (Blos, 1968; Erikson, 1959; Kernberg, 1978), characterized by profound transformations in physical development and neurophysiological processes (Benzi et al., 2022; Casey et al., 2008; Spear, 2000). During this period, adolescents encounter unique challenges as they navigate developmental tasks aimed at forming a stable and coherent identity (Cicchetti & Rogosch, 2002). As cognitive capacities advance, adolescents develop increasingly nuanced and organized self-perceptions, along with an enhanced ability to introspect and analyze their own cognitive processes (Damon & Hart, 1988; Fonagy & Target, 1997; Steinberg & Morris, 2001).

These changes are accompanied by a gradual shift away from dependence on parental figures, to prioritization of peer relationships (Smetana et al., 2006). Therefore, this shift is characterized by the expansion of peer networks, the development of close and supportive friendships (Furman & Buhrmester, 1992; La Greca et al., 2008), and the emergence of romantic relationships (Collins et al., 2009).

As adolescents experience substantial cognitive and biological changes, their interactions with peers become increasingly influential, often exceeding parental impact (Roach, 2018). Adolescents strongly rely on peer validation to support their self-esteem and their emotional well-being (Bayer et al., 2018). Positive peer support has been consistently related to greater mental health, as not only build up resilience but also

enhance the development of social skills essential for managing future relationships and challenges (Roach, 2018). Research shows that secure attachment and emotional competence within peer relationships foster psychological well-being by reducing emotional distress, behavioral problems, and difficulties in interpersonal relationships (Jiménez-Rodríguez et al., 2022).

The impact of negative peer experiences on adolescent development

Negative peer experiences, such as victimization and harmful peer pressure, can disrupt developmental trajectories and contribute to psychopathological outcomes. This dual role of peer interactions highlights their potential to either support or hinder adolescent development (Prinstein & Giletta, 2016). Research has shown that peer exclusion triggers heightened activity in brain regions associated with emotional distress, including the anterior cingulate cortex and the insula, underscoring the profound emotional impact of social interactions during this developmental stage (Bayer et al., 2018). Peer rejection during adolescence has a number of wide-ranging effects, affecting both psychological and behavioral outcomes.

On the one hand, peer rejection is strongly associated with internalizing problems such as anxiety and depression (Syakarofath et al., 2021). Rejection sensitivity adds complexity to this relationship, acting as both a precursor and a consequence of depression and aggression, creating a bidirectional cycle that intensifies interpersonal challenges (Beeson et al., 2020). Furthermore, peer rejection often leads to heightened emotional reactivity, with adolescents exhibiting increased negative emotions and diminished positive emotions, especially when depressive symptoms (Ha et al., 2019) or difficulties in personality organization (Fontana et al., 2018) are present.

On the other hand, peer rejection is also linked to antisocial tendencies, as rejected adolescents may align with deviant peer groups, where negative behaviors are reinforced through peer influence (Kornienko et al., 2020). The coping strategies adolescents use to handle peer exclusion are also critical to their psychosocial adjustment: those who adopt helpless-avoidant approaches tend to report worse outcomes (Titova et al., 2022).

Reflective functioning in the context of peer exclusion

Thus, while peer rejection is a common experience during adolescence, individual differences can influence how adolescents interpret and respond to these social events (Masten et al., 2009).

In this vein, mentalization, often referred to as reflective functioning (RF), denotes the capacity to understand one's own and others' behaviors in terms of underlying mental states (Fonagy et al., 2018; Fonagy & Target, 1997). The progression of mentalizing faculties is characterized by a curvilinear trajectory, reaching its zenith in emerging adulthood, and it is shaped by variables such as gender and personality characteristics, including agreeableness and openness to experience (Desatnik et al., 2023).

Mentalization constitutes a crucial element of social cognition that impacts adolescents' capacity to initiate and sustain relationships, although the nuances of its interaction with other socio-cognitive elements

necessitate further investigation (Clarke et al., 2020; Guazzelli Williamson & Mills, 2023). The intricate nature of mentalization as a multifaceted construct, which includes cognitive and affective dimensions, implies that its impairment may be associated with various manifestations of psychopathology during adolescence (Benzi et al., 2023). For instance, Quek et al. (2018) explored a mentalization-based model of borderline pathology, revealing that impaired mentalization correlates with more severe borderline traits. This suggests that difficulties in understanding one's mental states contribute to emotional dysregulation and dysfunctional relationships. During adolescence, when peer relationships become a primary arena for identity consolidation and social learning, RF is especially relevant for making sense of ambiguous peer feedback and for maintaining a coherent representation of self and others in social contexts (Benzi et al., 2023; Clarke et al., 2020; Guazzelli Williamson & Mills, 2023). In this vein, RF should not be considered only as a stable protective factor, but also as a capacity that may be variably accessible depending on contextual demands. Episodes of exclusion can increase social stress and uncertainty, potentially constraining reflective processing and encouraging more immediate, less elaborated interpretations of social intent (Guazzelli Williamson & Mills, 2023).

Pathological Narcissism and peer relationships in adolescence

Recent research has highlighted that pathological narcissistic traits may begin to manifest during adolescence (Barry et al., 2019; Ojanen & Findley-Van Nostrand, 2020). Pathological narcissism in adolescence is associated with maladaptive outcomes, including aggression, low self-esteem, and difficulties in interpersonal relationships. By contrast, non-pathological narcissism is related to positive self-esteem and fewer internalizing problems (Barry & Kauten, 2014).

Narcissism represents a critical aspect of adolescents' growth, characterized by heightened vulnerability to shame, self-consciousness, and challenges to self-worth (Hill & Lapsley, 2011). In this vein, the interplay between narcissism and peer relationships further complicates adolescent development. Narcissism indeed plays a pivotal role in the dynamics of peer inclusion and exclusion during adolescence (Barry & Wallace, 2010). Adolescents with grandiose narcissism may initially gain acceptance among their peers due to their assertiveness and charismatic behaviors, but these relationships often deteriorate as their aggressive responses to perceived threats alienate them from the others (Ang et al., 2010). Farrell and Vaillancourt (2020) highlighted the heightened susceptibility of adolescents with high narcissistic traits to bullying and social exclusion, which can exacerbate feelings of isolation and emotional distress.

Pathological narcissism in adolescents encompasses both grandiose and vulnerable dimensions, each associated with distinct psychosocial challenges. Research suggests that the grandiose dimension is particularly associated with increased suicidal ideation and potentially life-threatening behaviors, as adolescents may engage in these actions to restore control and self-esteem during periods of affective dysregulation (Williams et al., 2021). Grandiose narcissism is (Quek et al., 2018) characterized by assertiveness, a sense of entitlement, and aggressive behaviors when self-esteem is threatened. Adolescents exhibiting grandiose narcissism often deploy unhealthy emotional regulation strategies, such

as aggressive reactions to negative feedback, which can lead to interpersonal conflicts and peer rejection (Barry et al., 2019; Miller et al., 2011). Research suggests that grandiose narcissism remains relatively stable throughout adolescence, often reinforced by grandiose fantasies and inflated self-perceptions (Fontana et al., 2023). This stability can contribute to enduring maladaptive behaviors, ultimately impairing the formation of authentic relationships. By contrast, vulnerable narcissism is marked by defensiveness, hypersensitivity to criticism, and low self-esteem. Adolescents with vulnerable narcissism may experience heightened social isolation and emotional distress, exacerbated by their hypersensitivity to peer evaluation (Fanti & Henrich, 2015; Miller et al., 2011). This vulnerability often places them at a greater risk for depression, substance use, and behavioral addictions during adolescence, particularly in response to negative social interactions (Bilevicius et al., 2018; Fontana et al., 2023).

Clinical and mentalization-based models conceptualize pathological narcissism as involving reliable mentalizing imbalances, especially under interpersonal stress (Choi-Kain et al., 2022; Drozek & Unruh, 2020). In particular, narcissistic functioning has been described as characterized by a self-oriented, predominantly cognitive focus that may be weakly integrated with affective experience and the other's perspective, alongside difficulties in affect representation, empathy, and related meta-cognitive processes (Dimaggio & Attinà, 2012; Drozek & Unruh, 2020). From this perspective, lower reflective functioning is expected among adolescents with higher pathological narcissism, because the capacity to reflect flexibly on one's own and others' mental states is more likely to destabilize when self-esteem is threatened and relational evaluation becomes salient (Duval et al., 2019).

In emerging adults, Fossati and colleagues (2017) employed the Social Media Ostracism Paradigm (SMOP; Wolf et al., 2015) to examine behavioral and cognitive responses associated with narcissism, particularly in the context of peer group inclusion and exclusion. In this paradigm, "likes" function as standardized cues of social attention, and ostracism/inclusion is manipulated by varying how much social attention the participant receives relative to peers. Thus, the study explored how individuals with narcissistic traits reacted to feedback about social inclusion or exclusion. Results indicated that both vulnerable and grandiose narcissistic participants experienced feelings of exclusion or negative emotions following social exclusion. Notably, grandiose narcissism appeared to buffer against self-esteem threats and foster an illusory sense of control during episodes of social exclusion (Fossati et al., 2017).

Present Study

Despite significant progress in understanding the interplay between personality traits and peer dynamics, several gaps remain in the literature. Reflective functioning (RF) is increasingly recognized as a core socio-cognitive capacity for navigating adolescent peer relationships (Fonagy et al., 2018; Fonagy & Target, 1997), yet less is known about how acute experiences of peer inclusion or exclusion relate to adolescents' momentary RF difficulties, and whether personality features such as pathological narcissism condition this response. Furthermore, while the emotional and behavioral consequences of peer rejection, such as depression, anxiety, and antisocial tendencies, are well-documented, little is known about how distinct personality

traits, including narcissism, shape adolescents' responses to social exclusion. Existing research has also largely examined grandiose and vulnerable narcissism independently, overlooking their potential interplay and the integration of cognitive (e.g., grandiose fantasies) and emotional (e.g., hypersensitivity to rejection) dimensions. These gaps suggest the importance of multidimensional approaches to understanding the intersection of reflective functioning, pathological narcissism, and peer dynamics in adolescence. Although narcissism is conceptualized as a multidimensional construct (e.g., Pincus et al., 2009), in the present study we were interested in the construct's full range of clinical characteristics (e.g., features characterizing both narcissistic grandiosity and narcissistic vulnerability); accordingly, we focused on the overall pathological narcissism severity level.

The study aims to explore the interplay between pathological narcissism, reflective functioning (RF), and peer exclusion or inclusion among adolescents. Thus, the study hypothesizes that peer exclusion (vs. inclusion) is associated with greater post-task difficulties in reflective functioning and higher rejection-related emotions, and examines whether these associations vary as a function of pathological narcissism.

Particularly, it was expected that:

- (i) Adolescents with high levels of pathological narcissism will exhibit greater difficulties in reflective functioning compared to adolescents with low levels of pathological narcissism;
- (ii) High-risk narcissism adolescents will report greater rejection-related emotions than low-risk adolescents, indicating that pathological narcissism is associated with heightened emotional responses to social exclusion;
- (iii) Peer exclusion rather than peer inclusion impacts adolescents' ability to engage in self-reflection and understand the mental states of themselves and others.
- (iv) The effect of social exclusion or inclusion on reflective functioning will be moderated by the level of pathological narcissism. Specifically, high-risk narcissism adolescents in a condition of peer-rejection will show significantly higher reflective functioning difficulties than those in a condition of inclusion, whereas low-risk adolescents will display relatively stable reflective functioning across different inclusion levels.

Methods

Participants

Inclusion criteria. The inclusion criteria required participants to be between 14 and 18 years old, residing in the Rome metropolitan area, and fluent in Italian. Participants were excluded if they were older than 18, not fluent in Italian, or unable to complete questionnaires or interviews due to intellectual disabilities or neurodevelopmental disorders. To maintain participant privacy and confidentiality, the survey was conducted anonymously, with each participant assigned a unique numeric code. Participation was voluntary, and no incentives were offered. Adolescents were informed that the study aimed to explore their self-perception and interactions with peers. Parental consent was obtained for all participants, with parents provided a thorough explanation of the study's purpose. Socio-economic status was assessed through a socio-demographic form that gathered information on parental employment from the adolescents. Each participant completed the

SMOP individually in the school's counseling service, with each session lasting approximately 15 minutes and audio-recorded for accuracy. Data collection was managed by clinical psychology graduate students trained in administering the SMOP and supervised during the assessment of reflective functioning. Interviewers, who were unaware of the primary study hypotheses and to participants' narcissism levels, coded the interviews directly from audio recordings, following a reflective functioning manual with specific scoring guidelines (Fonagy et al., 2012). The study adhered to APA ethical standards for participant treatment and complied with the Ethical Principles for Medical Research Involving Human Subjects (Declaration of Helsinki).

Sample description. A sample of 204 adolescents (53% female; age range 14-18 years; M age = 16.5, SD = 1.46) participated in the study. Most participants were Italian (92.2%), with the remainder consisting of 1% Filipino, 0.5% Nigerian, 1.5% Romanian, and smaller percentages from countries such as Albania, Brazil, and Egypt. Socio-economic status was assessed at the household level by collecting data on parents' occupations. Among the parents, 29% were laborers, 21% held technical professional roles, 10% were clerks, and 10% were in sales. Additionally, 4% were highly qualified professionals, 4% were in the army, 2% were business owners or managers, and another 4% fell into other occupational categories. Sixteen percent of adolescents did not report on their parents' occupations. The sample included students from various educational institutions: 31.4% attended scientific high schools, 22.1% professional schools, 12.7% linguistic high schools, 29% were from socio-health and humanities-oriented institutions, and 4.8% attended other types of schools.

Sample size. A preliminary power analysis was performed using G*Power version 3.1.9.5 (Faul et al., 2007) to estimate the minimum sample size required to test the study's hypothesis. Results indicated that a sample size of $N = 84$ would be needed to achieve 95% statistical power to detect a medium effect size, with a significance level of $\alpha = .05$ for a Fisher test comparing effects between two groups. Therefore, the obtained sample size provided sufficient power for the study.

Procedure

Sample recruitment. The initial sample used for the validation of the Pathological Narcissism Inventory (PNI) in adolescents and young adults (Somma et al., 2020) was expanded with additional data from subsequent studies (Fontana et al., 2023). From this overall sample, a high-risk subgroup (scoring above the 90th percentile on the PNI total score) and a low-risk subgroup (scoring below the 90th percentile) were randomly selected.

Experimental Procedure. Participants engaged in an online task designed to simulate social media interactions, based on the Social Media Ostracism Paradigm (SMOP, Wolf et al., 2015). The SMOP task simulates social exclusion through social media and is a recent experimental paradigm where participants are involved in an online group activity. In this task, each participant created an avatar with a short self-description before entering the experimental phase, where group members could view each other's avatars. During this phase, group members exchanged "likes" as standardized social-attention cues (i.e., minimal signals that one's profile has been noticed and acknowledged by others). In the SMOP logic, perceived inclusion versus ostracism is

operationalized through the relative distribution of these social-attention cues within the group (receiving fewer, similar, or more likes than peers), rather than as a measure of mere appreciation (Wolf et al., 2015). In reality, only one participant took part in each session, with pre-programmed computer scripts determining the behavior of the other group members. The level of ostracism or inclusion was manipulated by varying the number of likes received by the participant's profile. Importantly, participants were unaware that the other group members were fictitious and programmed by the researchers to enhance the experience of social exclusion. Each participant from the two subgroups (High-risk and Low-risk) was randomly assigned to one of three experimental conditions: Over-Inclusion (OI), Over-Exclusion (OE), and Neutral (N). In the Over-Inclusion (OI) condition, participants received more likes than others, thereby communicating higher relative social attention (over-inclusion) within the group; in the Neutral (N) condition, adolescents received a standard number of likes similar to their virtual peers; and in the Over-Exclusion (OE) condition, they received only one like, while others received significantly more, thereby communicating markedly lower relative social attention (over-exclusion/ostracism). The procedure adopted resembles Fossati and colleagues' study (Fossati et al., 2017).

Post-task rejection-related emotions and reflective functioning assessment. Following this manipulation, rejection-related emotions were assessed through a self-report while reflective functioning was assessed through a brief interview that included the following questions: "Please describe what happened during the task", "How did you react to that?", "Why do you think you received this number of likes?" and "Is there anything you would have changed about the profile you described?". Responses were audio-recorded and later evaluated by two independent raters to assess reflective functioning.

Debriefing. Upon completing the experiment, all participants were provided with comprehensive information about the study's objectives and procedures. They were also given the option to request the deletion of their data if they wished. Additionally, a discussion was held with each adolescent to explore and address any emotional responses that may have been stimulated by the task.

Measures

Pathological Narcissism. Pathological Narcissism was assessed through the Pathological Narcissism Inventory (PNI; Pincus et al., 2009; Somma et al., 2020). PNI is designed to assess different forms of pathological narcissism, consisting of 52 items rated on a 6-point scale, ranging from 0 ("Not at all like me") to 5 ("Very much like me"). The PNI includes seven first-order scales: Contingent Self-Esteem (CSE), which captures self-esteem fluctuations when external validation is absent (e.g., "I need others to acknowledge me"); Devaluing (DEV), reflecting a lack of interest in those who do not provide admiration (e.g., "Sometimes I avoid people because I'm concerned that they'll disappoint me"); Exploitativeness (EXP), representing manipulative tendencies in interpersonal relationships (e.g., "I find it easy to manipulate people"); Self-Sacrificing Self-Enhancement (SSSE), involving the use of altruism to maintain an inflated self-image (e.g., "I try to show what a good person I am through my sacrifices"); Hiding the Self (HS), indicating reluctance to expose personal flaws or needs (e.g., "I can't stand relying on other people because it makes me feel weak"); Grandiose

Fantasy (GF), which describes engagement in fantasies about success and admiration (e.g., “I often fantasize about being recognized for my accomplishments”); and Entitlement Rage (ER), reflecting anger when entitled expectations are unmet (e.g., “I can get pretty angry when others disagree with me”). Additionally, the PNI provides second-order scales: Narcissistic Grandiosity (NG), which is derived from Exploitativeness, Self-Sacrificing Self-Enhancement, and Grandiose Fantasy; Narcissistic Vulnerability (NV), derived from Contingent Self-Esteem, Hiding the Self, Devaluing, and Entitlement Rage; and a Total Score, calculated as the average of all PNI items. The PNI has demonstrated strong construct validity, as well as evidence of measurement invariance and convergent and discriminant validity across studies (Di Pierro et al., 2023; Morf et al., 2017; Somma et al., 2020). Because of our interest in the full range of narcissistic clinical features, in the present study, we relied on the Total Score to assign adolescents to the High-risk and Low-risk subgroups.

Reflective Functioning. The adolescent’s replies to the brief interview after the SMOP procedure were scored according to the Reflective Functioning Manual (Fonagy et al., 2012).

RF scores ranged from -1 (indicating presence of hostility or active evasion from thinking about what happened and what they felt during the task) to 9 (indicating the full presence of an exceptional ability to reflect on one’s own and other’s mental states). Inter-rater reliability between two raters’ judgement on the quality of adolescents mentalizing attitude was assessed using the intraclass correlation coefficient (ICC) with a two-way mixed-effects model for absolute agreement. The analysis revealed excellent agreement between the two raters, with ICC (2,1) = .949, 95% CI [0.933, 0.961], $p < 0.001$. This indicates a high degree of consistency and reliability in the evaluations provided by the raters.

Rejection-related emotions. Rejection-related emotions were measured using the Rejection Emotion Scale (RES; Buckley et al., 2004). This scale evaluates five emotions: anger, anxiety, sadness, hurt, and happiness. Each item is rated on a 10-point scale, from 1 (not at all) to 10 (very much). To create an overall index of negative emotions, scores are averaged, with happiness scores reversed. Higher scores on this index indicate greater levels of negative emotions associated with rejection. Cronbach’s alpha coefficient value suggested adequate internal consistency for the overall index of negative emotions, $\alpha = .76$.

Data Analysis

Data analyses were conducted using Jamovi version 2.3 and R version 4.4.0 (2024-04-24). A Vargha-Delaney A measure (Vargha & Delaney, 2000) was conducted to compare PNI total scores between high-risk and low-risk narcissism subgroups, as assumption checks revealed heterogeneity of variances. Vargha-Delaney A measure is a nonparametric effect size statistic that quantifies the probability that a randomly chosen PNI total score from the High Narcissism group is greater than one from the Low Narcissism group. The A measure ranges from 0 to 1, where values above 0.50 indicate that the High group is more likely to have higher PNI scores than the Low group, with effect size benchmarks of small (0.56-0.64), medium (0.64-0.71), and large (≥ 0.71). Then, Spearman’s rank correlation analysis was performed to examine the relationship between RF and rejection-related emotions, assessing whether these constructs were associated. Additionally, separate factorial ANOVA were conducted

to examine the effects of inclusion levels and narcissism on RF and rejection-related emotions. The analysis included two independent variables: inclusion level (three SMOP levels: OI, N, and OE) and narcissism level (two levels: High-risk and Low-risk), with one ANOVA conducted for RF and another for rejection-related emotions. We employed the Aligned Rank Transformation (ART) approach (Elkin et al., 2021; Wobbrock et al., 2011), a nonparametric method that allows for factorial ANOVA while addressing violations of normality and homogeneity of variances. The ART procedure first aligns data and then ranks the aligned values across the dataset, enabling ANOVA-based inference. Significant main and interaction effects identified were further explored using post-hoc comparisons with Tukey’s HSD test for multiple comparisons (Elkin et al., 2021). ART ANOVA and post-hoc comparisons were performed using R “ARTool” (Kay et al., 2025). These procedures ensured robust statistical interpretation of differences between the levels of inclusion and narcissism across the dependent variables.

Results

Assumption checks for homogeneity of variances indicated that the variances between the groups were unequal, as evidenced by significant results from Levene’s test ($p = .003$) and Bartlett’s test ($p = .004$). Thus, a Vargha-Delaney A measure was conducted to examine differences in total PNI scores between the high-risk and low-risk subgroups. The analysis revealed a Vargha Delaney A measure of 1, indicating that every randomly selected PNI total score from the High Narcissism group was greater than any score from the Low Narcissism group. Thus, PNI total scores were consistently higher in the High Narcissism group compared to the Low Narcissism group. Descriptive statistics also showed that participants in the high-risk subgroup had significantly higher mean PNI scores ($M = 3.04$, $SD = 0.268$) compared to participants in the low-risk group ($M = 1.70$, $SD = 0.356$).

The association between reflective functioning (RF) and total rejection-related emotions (REStot) was examined using Spearman’s rank correlation. The correlation was small and not statistically significant ($r = -0.063$, $p = .374$), suggesting that RF and rejection-related distress were not reliably associated in this sample. Thus, to further explore the effects of narcissism and inclusion levels on RF and rejected-related

Table 1. Descriptive statistics for reflective functioning (RF) and rejection-related emotions (REStot)

		RF	REStot
Group	n	M (SD)	M (SD)
Overall	204	2.10 (1.69)	1.51 (0.23)
SMOP: OI	68	2.41 (1.38)	1.47 (0.22)
SMOP: N	68	2.15 (1.44)	1.44 (0.16)
SMOP: OE	68	1.74 (2.10)	1.63 (0.25)
Narcissism: Low	102	2.29 (1.63)	1.48 (0.21)
Narcissism: High	102	1.90 (1.73)	1.55 (0.24)

Note. Values are reported as mean (standard deviation). RF = reflective functioning. REStot = total rejection-related emotions. SMOP: OI = over-inclusion; N = neutral; OE = over-exclusion. Narcissism: Low vs High refers to the PNI-based grouping.

emotions, separate ART ANOVA were conducted.

For RF, the ART ANOVA accounted for 7.9% of the variance in RF ($R^2 = .079$, $F(5, 198) = 3.43$, $p = .005$). The main effect of inclusion level on RF did not reach statistical significance, $F(2, 198) = 2.56$, $p = .080$. The main effect of narcissism was statistically significant ($F(1, 198) = 13.72$, $p < .001$), indicating that individuals with Low and High narcissism differed in their reflective RF scores, regardless of inclusion levels. Specifically, individuals with Low narcissism had significantly higher RF scores than those with High narcissism. This suggests that lower narcissism levels are associated with better RF, reinforcing the idea that individuals with lower narcissistic traits may engage in more adaptive mentalizing processes. Additionally, the interaction between narcissism and inclusion levels were significant ($F(2, 198) = 6.76$, $p < .001$), indicating that the effect of inclusion levels on RF varied by narcissism group. Post-hoc comparisons with Tukey's HSD correction for multiple comparisons revealed that, within the OE condition, participants of the high-risk narcissism subgroup had significantly lower RF scores compared to those of the low-risk subgroup ($t(198) = -2.906$, $p < .05$), suggesting greater difficulties in RF in the high-risk narcissism subgroup. Thus, high-risk participants in the OE condition displayed significantly higher difficulties in RF than their low-risk counterparts, suggesting that RF difficulties were more pronounced under over-exclusion among adolescents with higher pathological narcissism. This pattern is consistent with a moderating role of pathological narcissism in the association between inclusion level and RF, such that RF difficulties under over-exclusion were more pronounced among high-risk adolescents. Importantly, within the high-risk subgroup, the OE–OI contrast was in the expected direction and approached conventional statistical significance ($t(198) = -2.823$, $p = .0579$). Overall, these results support a SMOP $\times$ Narcissism pattern in which RF differences are most evident under over-exclusion, with trend-level evidence for a within–high-risk OE versus OI difference. Furthermore, adolescents in the low-risk narcissism subgroup assigned to the OI condition exhibited better RF functioning than those in the high-risk narcissism subgroup assigned to the OE condition ($t(198) = -3.290$, $p < .01$).

Rejection-related emotions were examined as a substantive outcome rather than as a manipulation check. Thus, for Rejected-related emotions the ART ANOVA explained 12.7% of the variance ($R^2 = .127$, $F(5, 198) = 5.757$, $p < .001$). Significant inclusion levels ($F(2, 198) = 13.890$, $p < .001$) were observed, while the main effects of narcissism ($F(1, 198) = 2.896$, $p = .090$) and the interaction effect were not significant ($F(2, 198) = 0.880$, $p = .416$). Participants in the OE condition reported significantly higher rejection-related emotions scores than those in the N ($t(198) = -4.923$, $p < .001$) and OI ($t(198) = -4.092$, $p < .001$) conditions, indicating that social exclusion strongly influenced rejection-related emotions.

Discussion

The findings of this study contribute to a better understanding of the complex interplay between pathological narcissism, reflective functioning, and peer exclusion during adolescence – a developmental stage characterized by heightened sensitivity to social interactions (Steinberg & Morris, 2001). The association between high-risk pathological narcissism

and difficulties in reflective functioning extends prior findings on the emotional fragility of individuals with narcissistic traits (Fossati et al., 2017). This finding aligns with research and clinical literature suggesting that lower narcissistic traits are associated with more adaptive mentalizing processes, whereas higher narcissistic traits may be linked to impairments in reflective functioning, potentially due to defensive self-enhancement strategies (Choi-Kain et al., 2022; Drozek & Unruh, 2020; Williams et al., 2021).

In line with the significant SMOP $\times$ Narcissism interaction, over-exclusion appears to be the context in which narcissism-related vulnerabilities in reflective functioning are most evident, rather than indicating a uniform main effect of inclusion/exclusion on RF. These findings align with existing research, which highlights the dual role of peer interactions in either fostering resilience or contributing to psychopathology (Ha et al., 2019; Prinstein & Giletta, 2016). The heightened RF difficulties observed in high-risk narcissistic adolescents during the Over-Exclusion condition suggest that these individuals struggle to process and reflect upon social rejection constructively. This finding supports the theoretical framework proposed by Fonagy and Target (1997), which links deficits in mentalization to emotional hypersensitivity and difficulties in self-regulation. The unique vulnerability of high-risk adolescents to exclusion also resonates with the literature on rejection sensitivity, which underscores its bidirectional relationship with internalizing symptoms such as depression and aggression (Beeson et al., 2020). Notably, the inability to engage in effective RF under social exclusion may perpetuate a cycle of interpersonal conflict, further isolating these adolescents and exacerbating their emotional distress (Barry & Wallace, 2010; Fanti & Henrich, 2015).

A significant main effect of inclusion levels revealed that adolescents in the over-exclusion condition reported significantly higher rejection-related emotions compared to those in both neutral and the over-inclusion condition. This finding indicates that social exclusion strongly amplifies feelings of rejection in adolescents, which aligns with previous research showing that experiences of exclusion can trigger heightened emotional distress, interpersonal sensitivity, and negative self-referential processing (Masten et al., 2009). In contrast, the main effect of narcissism and the interaction effect were not significant, suggesting that narcissistic traits did not significantly influence rejection-related emotional responses in this study. This may indicate that rejection distress is a more generalized emotional response that affects adolescents regardless of narcissism level, highlighting the universality of social exclusion as an emotionally distressing experience in adolescence. Alternatively, it is possible that defensive processes in narcissistic individuals (e.g., self-enhancement, denial, and dissociation) partly buffer the self-reported intensity of rejection-related affect (Cascio et al., 2015; Diamond et al., 2021). Relatedly, adolescents may also be reluctant to fully acknowledge or disclose rejection-related distress when doing so is perceived as socially costly, which could further contribute to attenuated self-reported emotional responses in laboratory contexts (Meral et al., 2021). At the same time, rejection-related negative emotions should not be conceptualized as merely “undesirable”: in both laboratory and everyday-life contexts they can represent normative, potentially functional signals of threatened belongingness and may motivate distinct coping responses (e.g., withdrawal/solitude seeking, attempts at reconnection, or other regulatory strategies)

(Büttner et al., 2025; Wesselmann et al., 2015). An important nuance concerns the emotional specificity of adolescents' responses to exclusion. Although we used the established RES procedure to derive an overall index of rejection-related negative affect, different emotions may reflect partially distinct psychological processes and action tendencies (i.e., anger-oriented protest and externalization vs sadness-oriented withdrawal and internalization), and may plausibly show differential links with narcissistic features. Relatedly, shame-linked reactions, which are conceptually close to social evaluation and self-threat, may be particularly relevant to narcissistic vulnerability and to ostracism-related distress. Accordingly, the absence of a narcissism-by-condition effect on the overall index should not be interpreted as evidence that narcissistic traits are unrelated to specific affective responses: rather, our findings indicate that, at the level of aggregated rejection-related distress, social exclusion produced a robust and broadly shared emotional reaction across adolescents.

Over-inclusion was associated with lower rejection-related emotions relative to over-exclusion: for RF, however, the main effect of inclusion level was not statistically significant, and differences were primarily conditional on narcissism level, consistent with the observed SMOP $\times$ Narcissism interaction. This finding aligns with the broader literature emphasizing the importance of positive peer validation in promoting social and emotional well-being (Jiménez-Rodríguez et al., 2022; Roach, 2018). The observed independence of RF and rejection-related emotions adds another tone of complexity to the findings. While RF focuses on the cognitive and metacognitive processes underlying social interactions, rejection-related emotions reflect immediate affective responses to social stimuli. This distinction is consistent with theoretical models that differentiate cognitive and emotional dimensions of social cognition (Clarke et al., 2020; Guazzelli Williamson & Mills, 2023). The independence of these constructs underscores the importance of addressing both cognitive and emotional domains in interventions targeting adolescents with pathological narcissistic traits.

Taken together, the findings of this study also resonate with broader developmental theories on the impact of social relationships on self- and interpersonal-functioning. For instance, the interplay between narcissism, reflective functioning, and peer dynamics aligns with Kernberg's (1978) conceptualization of personality development, which emphasizes the role of early interpersonal experiences in shaping self-esteem regulation, identity and social behavior. Moreover, the observed trajectories of reflective functioning difficulties and emotional reactivity support the notion that adolescence represents a critical period for the consolidation of social-cognitive competencies, with significant implications for long-term psychosocial outcomes (Fonagy et al., 2018; Hill & Lapsley, 2011).

Despite its contributions, this study has several limitations that warrant consideration. First, the reliance on self-reports for rejection-related emotions may introduce response biases, such as social desirability or recall bias, which could affect the accuracy of the findings. Incorporating objective measures, such as physiological markers (e.g., cortisol levels) or behavioral observations, could provide a more comprehensive understanding of adolescents' emotional responses. Second, the sample was drawn exclusively from Italian adolescents, limiting the generalizability of the findings to other cultural contexts. Future research should

explore these dynamics in more diverse populations. Third, the use of a simulated social exclusion paradigm, while effective in controlled settings, may not fully capture the complexities of real-life peer interactions, thus limiting ecological validity. Consistent with this concern, recent experience-sampling and daily-life approaches show that ostracism occurs in ecologically valid settings and is embedded in repeated interpersonal sequences that may shape both affective responding and subsequent coping behaviors (Büttner et al., 2025). Longitudinal studies that track adolescents' experiences with peer rejection and inclusion over time could offer a richer perspective on these processes. Fourth, the cross-sectional nature of the study precludes conclusions about causality. While the findings suggest associations between pathological narcissism, reflective functioning, and rejection-related emotions, longitudinal designs are needed to determine the directionality and stability of these relationships.

Finally, we relied on the PNI total score to define high- versus low-risk groups, which may obscure potentially different effects of grandiose and vulnerable narcissism on post-exclusion responses. Future studies should test these PNI dimensions directly (e.g., using the second-order scores) to clarify whether distinct narcissistic processes differentially shape reflective functioning and affective reactions following exclusion. In this direction, future studies should also examine discrete emotional profiles following ostracism (e.g., anger, sadness, anxiety, and shame-related responses) rather than relying exclusively on global indices, and should test whether distinct narcissistic dimensions show emotion-specific patterns. Additionally, we caution against equating post-exclusion negative emotions with incapacity to adapt: short-term distress can be a functional, context-appropriate signal of threatened belonging, and its clinical meaning likely depends on intensity, persistence, regulation, and interpersonal consequences (Meral et al., 2021).

Clinical Implications

The findings of this study offer important implications for clinical practice, particularly in the design of interventions targeting adolescents with pathological narcissistic traits and those struggling with peer rejection. In the present study, reflective functioning was examined as a post-task outcome following experimentally manipulated peer inclusion/exclusion. Accordingly, the clinical implications offered here are based on the observed pattern of vulnerability in RF under exclusion (particularly among adolescents with higher pathological narcissism) and should be interpreted as hypothesis-generating recommendations for prevention and treatment research. Interventions aimed at enhancing reflective functioning could be particularly beneficial for high-risk adolescents, as improved mentalization skills may help mitigate the negative impact of social exclusion and foster healthier interpersonal relationships. Mentalization-Based Therapy (MBT), which focuses on strengthening reflective functioning, represents a promising avenue for addressing these vulnerabilities (Drozek & Unruh, 2020). Moreover, school-based programs that promote inclusive peer environments could serve as preventive measures, reducing the risk of exclusion and fostering positive peer interactions (Chen et al., 2025; George et al., 2024; Sechi et al., 2024). These programs should include components that address rejection sensitivity and mentalization difficulties, particularly

for adolescents with heightened narcissistic traits. Given the distinct challenges posed by grandiose and vulnerable dimensions of pathological narcissism, interventions should be tailored to address the unique needs of each profile. For adolescents with grandiose traits, strategies may include fostering empathy and perspective-taking to reduce interpersonal conflicts and aggressive responses. For those with vulnerable traits, interventions should focus on building resilience to mitigate hypersensitivity to rejection and social evaluation (Diamond et al., 2021; Drozek & Unruh, 2020). Finally, clinicians working with adolescents should be aware of the dual role of peer interactions in either supporting or hindering development. Integrating peer-focused approaches into therapy may provide a more holistic framework for addressing the social and emotional challenges associated with pathological narcissism and peer rejection.

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