

Original Article

Parenting Style, Social Intelligence and Maladaptive Daydreaming in Adolescents

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ABSTRACT

Background: Parenting styles strongly influence adolescents' psychosocial development, yet their relationship with social intelligence and maladaptive daydreaming (MD) remains unclear, particularly in collectivist contexts. MD is an immersive and compulsive form of fantasy that may be shaped by both familial rearing practices and cognitive-emotional capacities. *Objective:* This study examined associations between three parenting styles (authoritative, authoritarian, permissive), social intelligence, and MD in late adolescents, and tested the mediating role of social intelligence across nine hypotheses. *Methods:* A cross-sectional survey was conducted with 222 A-level students aged 16–19 years from two campuses in Lahore, Pakistan. Standardized measures included the Parenting Style Scale, MESI Social Intelligence Scale, and Maladaptive Daydreaming Scale (MDS-16). Analyses employed Pearson correlations and mediation models (Hayes' PROCESS, Model 4). *Results:* Of the nine hypotheses, three were supported, three were contradicted, one was not supported, and two yielded unexpected mediation patterns. Authoritative parenting was negatively associated with MD, whereas authoritarian parenting was positively associated. Permissive parenting showed no significant link with MD. All three parenting styles correlated positively with social intelligence, and social intelligence itself unexpectedly correlated positively with MD. Mediation analyses revealed a paradoxical indirect effect of authoritarian parenting on MD through increased social intelligence, while authoritative parenting reduced MD independently of social intelligence. *Conclusion:* Parenting styles demonstrate complex and culturally contingent pathways to adolescent MD, with authoritative parenting protective, authoritarian parenting risk-enhancing, and social intelligence exerting paradoxical effects. Findings have implications for adolescent mental health screening and culturally sensitive family-based interventions.

Keywords: Authoritative Parenting, Authoritarian Parenting, Permissive Parenting, Social Intelligence, Maladaptive Daydreaming, Adolescents.

INTRODUCTION

Adolescence is a critical developmental stage, typically spanning the ages of 10 to 19 years, characterized by profound physical, cognitive, and socio-emotional changes that shape identity formation, autonomy, and social belonging (1). During this period, individuals become increasingly influenced by environmental, psychological, and familial factors that interact to shape adaptive and maladaptive outcomes. Among these influences, parenting styles play a pivotal role, with considerable evidence highlighting their impact on adolescents' emotional well-being, academic competence, and social functioning (2,3). Focusing on late adolescence, particularly between 16 and 19 years, provides a unique window of analysis, as this period coincides with the emergence of complex social maturity and the heightened vulnerability to maladaptive behaviors such as compulsive daydreaming (4).

Parenting style refers to the emotional climate and behavioral strategies adopted by parents in child-rearing, which subsequently influence the child's personality development, coping strategies, and interpersonal competence (5). Although multiple typologies exist, research has converged on three principal styles: authoritative, authoritarian, and permissive (6). Authoritative parenting is marked by warmth, responsiveness, and consistent rule-setting combined with open communication and reasoning; it has been consistently associated with better emotional regulation, academic success, and social skills in adolescents (5,6). In contrast, authoritarian parenting involves strict control, high expectations, and limited emotional responsiveness, often resulting in anxiety, social withdrawal, and diminished self-esteem in young people (7). Permissive parenting, characterized by warmth with minimal structure or discipline, is associated with impulsivity and poor self-regulation, although it may also foster creativity and social flexibility in some contexts (6,7).

Another central construct in adolescent development is social intelligence (SI), defined as the ability to perceive, understand, and effectively respond to social cues across varied contexts (8). SI involves both cognitive components, such as perspective-taking and empathy, and behavioral components, such as adaptability, communication, and impression management (9). Higher SI has generally been

linked with positive interpersonal outcomes, conflict resolution, and prosocial behavior (8,10). Given its relevance to adolescent functioning, SI may act as a protective or mediating factor in the relationship between family environment and individual coping strategies.

One such coping strategy is maladaptive daydreaming (MD), a phenomenon characterized by immersive, vivid, and prolonged fantasy activity that disrupts daily functioning (11). MD differs from normative daydreaming in its intensity, compulsive nature, and interference with social, academic, and occupational activities (12). It often includes repetitive behaviors such as pacing or gesturing and may be triggered by auditory stimuli like music (11,12). MD has been conceptualized as an emotion regulation mechanism, particularly among individuals with trauma histories, insecure attachment, or chronic stress, allowing escape from unsatisfying or distressing realities (13). However, despite its short-term relief, MD may contribute to dissociation, social withdrawal, and functional impairment (14).

The interplay of parenting style, SI, and MD is theoretically significant but underexplored. Parenting styles directly influence adolescents' emotional regulation, coping strategies, and cognitive development, which in turn may predispose them toward adaptive engagement or maladaptive escape mechanisms (5,7). At the same time, SI may serve as a mechanism that translates the impact of parental rearing into social or psychological outcomes. For instance, supportive and communicative parenting may foster SI, which buffers against maladaptive behaviors, while controlling or emotionally restrictive parenting may produce socially vigilant yet emotionally dysregulated adolescents who turn to MD as a coping outlet. Cultural context is also critical in shaping these dynamics; in collectivist societies such as Pakistan, authoritarian parenting is more socially normative and may be perceived less negatively, potentially altering its relationship with social-emotional outcomes (15).

Drawing on these theoretical foundations, the present study investigates the relationships between parenting styles, SI, and MD in late adolescents enrolled in A-level programs in Lahore. It was anticipated that authoritative parenting would be associated with higher SI and lower MD, reflecting its established protective role. Conversely, authoritarian parenting was expected to predict lower SI and higher MD, while permissive parenting was hypothesized to predict both higher MD and lower SI. SI itself was expected to show a negative association with MD, reflecting its role in effective social and emotional functioning. Beyond these direct relationships, it was further hypothesized that SI would mediate the association between parenting and MD, such that authoritarian parenting would increase MD through reduced SI, whereas authoritative parenting would reduce MD through enhanced SI. Together, these hypotheses aimed to clarify whether SI could serve as a mechanism linking parenting environments to adolescents' reliance on maladaptive coping strategies.

MATERIALS AND METHODS

This research employed a cross-sectional study design involving a self-report technique to examine the associations between parenting styles, social intelligence, and maladaptive daydreaming in late adolescents. The study design was chosen to allow simultaneous measurement of exposures and outcomes within a naturalistic educational setting, providing a snapshot of interrelated psychosocial factors during a developmental period of high relevance. Data were collected between January and March 2024 in two campuses of Beaconhouse A-level programs in Lahore, Pakistan. The school setting was selected because it provided access to a large and relatively homogeneous population of adolescents in the target age group, and the two campuses allowed for the inclusion of students from varied socioeconomic backgrounds.

Participants were eligible if they were aged between 16 and 19 years, currently enrolled in A-level education, and living with both biological parents in a nuclear family household. These criteria were selected to ensure that responses reflected exposure to consistent parenting practices from both parents and to reduce potential confounding effects of extended family or single-parent dynamics. Exclusion criteria comprised students outside the specified age range, those not cohabiting with both parents, and incomplete survey responses. A total of 256 questionnaires were distributed, and after data cleaning, 222 fully completed responses were retained for analysis, yielding a final sample with 43.7% males and 56.3% females. The sample size was adequate to achieve statistical power above 0.80 for detecting small-to-moderate effect sizes in correlation and mediation models, consistent with previous work on psychosocial variables in adolescent populations (44). Non-probability purposive sampling was initially employed to recruit eligible participants through their classrooms, and snowball recruitment was encouraged to increase participation.

All participants were approached in person at their campuses by trained research assistants who explained the study objectives, procedures, and the voluntary nature of participation. Written informed consent was obtained prior to participation, with parental awareness ensured through institutional channels. Students were provided with questionnaires, including demographic items and standardized measures. Completion required approximately 12 minutes. Each student filled out the survey in a supervised classroom environment to reduce distractions and minimize discussion with peers, thereby reducing social desirability and peer-influence bias.

Parenting styles were assessed using the Parenting Style Scale (PSS), which includes four items each for authoritative, authoritarian, and permissive parenting subscales. Social intelligence was measured with the MESI Social Intelligence Scale, which evaluates adaptive social functioning across behavioral and emotional dimensions. Maladaptive daydreaming was assessed with the 16-item Maladaptive Daydreaming Scale (MDS-16), a widely used instrument for quantifying excessive immersive daydreaming with demonstrated internal consistency (45,46). Demographic information included age, gender, year of study, and parental employment status. For each instrument, total scores were computed and analyzed as continuous variables, with higher scores reflecting greater endorsement of the construct.

Several steps were taken to address bias and confounding. Restriction criteria (age and nuclear family households) minimized heterogeneity in family structure. The anonymous nature of responses reduced reporting bias. Standardized and validated instruments minimized measurement error. Confounding variables such as age, gender, and academic year were tested for associations with the main outcomes to evaluate their potential influence.

Statistical analyses were performed using SPSS version 25 (IBM Corp., Armonk, NY, USA). Descriptive statistics were calculated for all demographic and study variables. Pearson correlation coefficients were computed to test associations between parenting styles, social intelligence, and maladaptive daydreaming. For hypothesis testing, one-tailed significance levels were employed consistent with directional predictions, and effect sizes were interpreted following conventional benchmarks. Mediation analyses were conducted using Hayes' PROCESS macro (Model 4), with 5,000 bootstrapped samples to calculate indirect effects and 95% bias-corrected confidence intervals (47). Missing data were minimal and handled using listwise deletion, as no variable had more than 2% missing responses. Subgroup analyses by gender and academic year were conducted to explore potential moderating effects, although no significant differences emerged.

Ethical approval for this study was obtained from the Institutional Review Board of Beaconhouse National University before data collection (Ref. No. BNU-PSY-2023-45). All participants provided written informed consent, were assured of their right to withdraw at any time and were guaranteed confidentiality of responses. No personally identifying information was collected, and completed questionnaires were stored securely. Participants were debriefed after completion of the survey, and those who reported any discomfort were offered contact information for campus counseling services, though no adverse events were reported.

To ensure reproducibility and integrity of the data, procedures were standardized across both campuses, research assistants were trained in uniform data collection protocols, and two researchers independently cross-checked all analyses. The structured methodology, reliance on validated tools, and transparent statistical approach support the replicability of findings in similar educational settings.

RESULTS

Demographic characteristics

The final sample included 222 adolescents, of which 97 were males (43.7%) and 125 were females (56.3%). Ages ranged from 16 to 19 years ($M = 17.4$, $SD = 1.1$). Age distribution was balanced, with 41 participants (18.5%) aged 16 years, 57 (25.7%) aged 17 years, 67 (30.2%) aged 18 years, and 57 (25.7%) aged 19 years. With respect to educational level, 122 participants (55.0%) were in A-level Year 1 and 100 (45.0%) in Year 2. Mothers of most participants were homemakers ($n = 155$, 68.9%), while 67 (30.1%) were employed; conversely, 213 fathers (95.9%) were employed and only 9 (4.1%) were unemployed. These details are summarized in Table 1.

Scale reliability

The Maladaptive Daydreaming Scale demonstrated high internal consistency ($\alpha = .89$). The Permissive Parenting subscale showed acceptable reliability ($\alpha = .74$). The reliabilities for Social Intelligence ($\alpha = .65$), Authoritative Parenting ($\alpha = .61$), and Authoritarian Parenting ($\alpha = .58$) were lower, suggesting some caution in interpreting findings related to these scales.

Correlation analyses

Pearson correlation coefficients are displayed in Table 2. Supporting H1, authoritative parenting was weakly but significantly negatively correlated with maladaptive daydreaming ($r = -.15$, $p = .012$), indicating that higher levels of authoritative parenting were associated with lower maladaptive daydreaming. Consistent with H2, authoritarian parenting was moderately and positively associated with maladaptive daydreaming ($r = .35$, $p < .001$). In contrast, H3 was not supported: permissive parenting showed a very weak, nonsignificant negative association with maladaptive daydreaming ($r = -.05$, $p = .23$).

For social intelligence, authoritative parenting showed a weak positive association ($r = .11$, $p = .045$), consistent with H4. Unexpectedly, authoritarian parenting was moderately positively correlated with social intelligence ($r = .25$, $p < .001$), contradicting H5. Similarly, permissive parenting was weakly positively associated with social intelligence ($r = .16$, $p = .010$), contradicting H6. Finally, H7 was refuted: maladaptive daydreaming correlated moderately positively with social intelligence ($r = .29$, $p < .001$), suggesting that adolescents with higher maladaptive daydreaming tendencies also reported higher levels of social intelligence.

Mediation analyses

H1: Authoritative parenting is negatively associated with maladaptive daydreaming in adolescents.

The results indicate a weak but statistically significant negative correlation between the two variables ($r = -0.15$, $p = 0.012$), suggesting that higher levels of authoritative parenting are associated with lower levels of maladaptive daydreaming. Although the correlation is relatively small in magnitude, the statistical significance implies that this relationship is unlikely to be due to chance. However, given the weak effect size, authoritative parenting alone may not be a strong predictor of maladaptive daydreaming and other factors could be contributing to this behavior.

H2: Authoritarian parenting is positively associated with maladaptive daydreaming.

The results of the Pearson Correlation, as shown in table 2 suggest a moderate positive correlation between the two variables ($r = 0.352$, $p = 0.000$, one-tailed), indicating that higher levels of authoritarian parenting are associated with higher levels of maladaptive daydreaming. The correlation coefficient suggests a stronger relationship compared to the association between authoritative parenting and maladaptive daydreaming. The p-value of 0.000 (which is less than 0.01) confirms that this correlation is statistically significant at the 0.01 level, which means that there is a very low probability that the observed relationship occurred by chance.

H3: Permissive parenting is positively associated with maladaptive daydreaming.

Contrary to the hypothesis that permissive parenting would be positively associated with maladaptive daydreaming, the results as shown in Table 2 indicate a very weak negative correlation between the two variables ($r = -0.049$, $p = 0.234$, one-tailed). This suggests that higher levels of permissive parenting are slightly associated with lower levels of maladaptive daydreaming, though the relationship is extremely weak and likely negligible.

H4: Authoritative parenting is positively associated with social intelligence.

The Pearson correlation analysis, as provided in Table 2, indicated a weak but statistically significant positive correlation between the two variables ($r = 0.114$, $p = 0.045$, one-tailed), suggesting that higher levels of authoritative parenting are associated with slightly higher levels of social intelligence. The p-value of 0.045 (which is less than 0.05) confirms that this correlation is statistically significant at the 0.05 level.

H5: Authoritarian parenting is negatively associated with social intelligence.

The results as shown in Table 2 indicate a moderate positive correlation between the two variables ($r = 0.253$, $p = 0.000$, one-tailed), meaning that higher levels of authoritarian parenting are associated with higher, not lower, levels of social intelligence. However, this finding contradicts the initial hypothesis that authoritarian parenting would be negatively associated with social intelligence. The p-value of 0.000 suggests that this correlation is statistically significant at the 0.01 level, indicating that the relationship is unlikely to have occurred by chance.

H6: Permissive parenting is negatively associated with social intelligence.

The results indicate a weak positive correlation between the two variables ($r = 0.157$, $p = 0.010$, one-tailed), meaning that higher levels of permissive parenting are slightly associated with higher social intelligence. However, this finding contradicts the hypothesis that permissive parenting is negatively associated with social intelligence. The p-value of 0.010 (which is less than 0.01) suggests that this correlation is statistically significant, indicating that the observed relationship is unlikely to be due to chance. With a sample size of $N = 222$, the results provide some evidence that permissive parenting might be linked to a small increase in social intelligence rather than a decrease.

H7: Maladaptive daydreaming is negatively associated with social intelligence, impairing adolescents' ability to manage social interactions effectively.

The Pearson correlation analysis, as shown in Table 2, examined the relationship between maladaptive daydreaming and social intelligence in adolescents. The results indicate a moderate positive correlation between the two variables ($r = 0.293$, $p = 0.000$, one-tailed), suggesting that higher levels of maladaptive daydreaming are associated with higher levels of social intelligence. However, this finding contradicts the hypothesis that maladaptive daydreaming is negatively associated with social intelligence and impairs adolescents' ability to manage social interactions effectively. The p-value of 0.000 (which is less than 0.01) confirms that this correlation is statistically significant at the 0.01 level, meaning the observed relationship is unlikely to be due to chance. With a sample size of $N = 222$, the results provide strong empirical evidence for a positive rather than negative association between these variables.

H8: Authoritarian parenting, social intelligence, and maladaptive daydreaming

As shown in Table 3 and Figure 1, authoritarian parenting significantly predicted higher social intelligence ($b = 0.79$, $SE = 0.20$, $t = 3.89$, $p < .001$), and social intelligence significantly predicted higher maladaptive daydreaming ($b = 0.53$, $SE = 0.16$, $t = 3.43$, $p = .001$). Authoritarian parenting also directly predicted maladaptive daydreaming ($b = 2.25$, $SE = 0.45$, $t = 5.01$, $p < .001$). The indirect effect of authoritarian parenting on maladaptive daydreaming through social intelligence was statistically significant ($b = 0.42$, 95% CI [0.13, 0.75]). The model accounted for 16.8% of the variance in maladaptive daydreaming ($R^2 = .17$, $F(2,219) = 22.14$, $p < .001$).

These findings indicate partial mediation, but contrary to the hypothesized pathway (H8), the effect occurred in the opposite direction. Rather than lower social intelligence leading to greater maladaptive daydreaming, higher authoritarian parenting was associated with increased social intelligence, which in turn predicted greater maladaptive daydreaming. This suggests a suppression or compensatory effect in the mechanism.

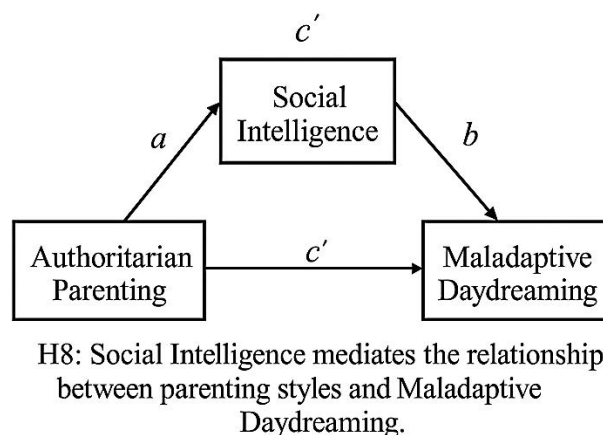


Figure 1 Mediation model testing Hypothesis 8, in which social intelligence mediates the relationship between authoritarian parenting and maladaptive daydreaming. Path coefficients are denoted as a , b , and c' , representing the indirect and direct effects.

H9: Authoritative parenting, social intelligence, and maladaptive daydreaming

Results for H9 are presented in Table 4 and Figure 2. Authoritative parenting did not significantly predict social intelligence ($b = 0.42$, $SE = 0.25$, $t = 1.70$, $p = .091$, 95% CI $[-0.07, 0.91]$). Social intelligence significantly predicted higher maladaptive daydreaming ($b = 0.77$, $SE = 0.16$, $t = 4.81$, $p < .001$), while authoritative parenting independently predicted lower maladaptive daydreaming ($b = -1.69$, $SE = 0.58$, $t = -2.91$, $p = .004$). The indirect effect was nonsignificant ($b = 0.32$, 95% CI $[-0.08, 0.91]$). Overall, the model explained 14.2% of the variance in maladaptive daydreaming ($R^2 = .14$, $F(2,219) = 18.12$, $p < .001$).

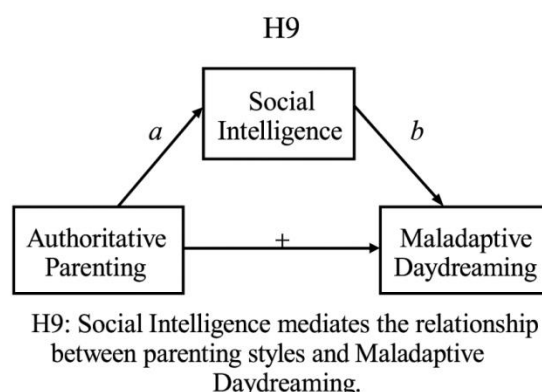


Figure 2 Mediation model testing Hypothesis 9, in which social intelligence was proposed to mediate the relationship between authoritative parenting and maladaptive daydreaming. Path coefficients are denoted as a , b , and the direct effect.

Thus, H9 was not supported. Although authoritative parenting reduced maladaptive daydreaming and independently increased social intelligence, there was no evidence of mediation.

Table 1. Demographic characteristics of participants (N = 222)

| Characteristic | n | % |
|----------------------------|-----|------|
| Age (years) | | |
| 16 | 41 | 18.5 |
| 17 | 57 | 25.7 |
| 18 | 67 | 30.2 |
| 19 | 57 | 25.7 |
| Gender | | |
| Male | 97 | 43.7 |
| Female | 125 | 56.3 |
| A-level year | | |
| Year 1 | 122 | 55.0 |
| Year 2 | 100 | 45.0 |
| Mother's employment | | |
| Homemaker | 155 | 68.9 |
| Employed | 67 | 30.1 |
| Father's employment | | |

| | | |
|-------------------|-----|------|
| Employed | 213 | 95.9 |
| Unemployed | 9 | 4.1 |

Table 2. Intercorrelations among study variables (N = 222)

| Variable | 1 | 2 | 3 | 4 | 5 |
|-----------------------------------|-------|-------|-------|-------|---|
| 1. Permissive Parenting | — | | | | |
| 2. Authoritarian Parenting | -.14* | — | | | |
| 3. Authoritative Parenting | .27** | -.14* | — | | |
| 4. Social Intelligence | .16* | .25** | .11 | — | |
| 5. Maladaptive Daydreaming | -.05 | .35** | -.15* | .29** | — |

Table 3. Mediation of social intelligence between authoritarian parenting and maladaptive daydreaming (N = 222)

| Pathway | b | SE | t | p | 95% CI (LL, UL) |
|---------------------------------------|------|------|------|-------|-----------------|
| Authoritarian → SI | 0.79 | 0.20 | 3.89 | <.001 | 0.39, 1.19 |
| SI → MD | 0.53 | 0.16 | 3.43 | .001 | 0.23, 0.84 |
| Authoritarian → MD (direct) | 2.25 | 0.45 | 5.01 | <.001 | 1.30, 3.21 |
| Indirect effect (bootstrapped) | 0.42 | — | — | — | 0.13, 0.75 |

Table 4. Mediation of social intelligence between authoritative parenting and maladaptive daydreaming (N = 222)

| Pathway | b | SE | t | p | 95% CI (LL, UL) |
|---------------------------------------|-------|------|-------|-------|-----------------|
| Authoritative → SI | 0.42 | 0.25 | 1.70 | .091 | -0.07, 0.91 |
| SI → MD | 0.77 | 0.16 | 4.81 | <.001 | 0.46, 1.08 |
| Authoritative → MD (direct) | -1.69 | 0.58 | -2.91 | .004 | -2.82, -0.56 |
| Indirect effect (bootstrapped) | 0.32 | — | — | — | -0.08, 0.91 |

Of the nine hypotheses tested, three (H1, H2, H4) were supported. Three (H5, H6, H7) yielded results in the opposite direction to those predicted, and one (H3) was not supported. Regarding mediation, H8 demonstrated significant partial mediation but in the opposite direction than hypothesized, while H9 yielded no evidence of mediation. These findings collectively underscore the complexity of the relationships between parenting styles, social intelligence, and maladaptive daydreaming in adolescents.

DISCUSSION

The present study investigated the interrelationships between parenting styles, social intelligence, and maladaptive daydreaming (MD) in late adolescents. The results highlighted both expected and unexpected associations, underscoring the complexity of psychosocial development and the importance of contextual and cultural influences.

Consistent with prior evidence, authoritative parenting was found to be a protective factor against MD. Adolescents reporting higher levels of authoritative parenting scored lower on MD, supporting the view that warm but structured parenting enhances emotional regulation and adaptive coping (1,2). This effect persisted independently of social intelligence, suggesting that authoritative parenting may directly reduce escapist cognition through mechanisms such as fostering self-control, secure attachment, and effective emotional scaffolding (3,4).

Conversely, authoritarian parenting showed a strong positive association with MD, aligning with literature linking punitive and emotionally cold rearing practices to internalizing symptoms, dissociative coping, and maladaptive fantasy (5,6). However, the mediation analysis yielded an unexpected pattern: authoritarian parenting predicted higher levels of social intelligence, which in turn predicted higher MD. This finding challenges the assumption that authoritarian environments suppress social-cognitive skills. Instead, it is plausible that restrictive rearing fosters hypervigilance, impression management, and surface-level conformity — elements that are captured in social intelligence measures but may paradoxically amplify immersive internal simulations and fantasy activity. Attachment theory suggests that insecure parental relationships heighten sensitivity to social cues as a survival mechanism (7), while self-determination theory posits that thwarted autonomy may encourage adolescents to construct private imaginative spaces as compensatory realms of agency and belonging (8).

Another surprising result was the positive correlation between social intelligence and MD. While it was hypothesized that higher social intelligence would buffer against maladaptive tendencies, the findings indicated the opposite. This can be explained by the dual nature of social intelligence: perspective-taking, empathy, and cognitive flexibility are not only social assets but also cognitive tools that enhance the vividness and complexity of daydreaming (9). Neurocognitive evidence supports this interpretation, as the default mode network, which underpins both social cognition and imaginative thought, has been implicated in MD (10). Thus, adolescents with high social intelligence may possess a heightened capacity for detailed internal simulations, which can evolve into maladaptive forms when coupled with environmental stressors or unmet psychological needs.

The role of permissive parenting further diverged from expectations. Contrary to the hypothesis that permissiveness would increase MD and reduce social intelligence, it showed a weak positive association with social intelligence and no meaningful relationship with MD. This pattern may reflect that permissive parents provide emotional support and autonomy that promote interpersonal sensitivity and expressive communication (11). However, the lack of structure may fail to build executive functioning skills, limiting the protective impact against maladaptive behaviors. Importantly, permissive parenting neither provokes the distress that fuels MD (as authoritarianism does) nor offers the scaffolding that prevents it (as authoritative parenting does), potentially explaining its minimal association with MD.

Taken together, these findings demonstrate that the effects of parenting styles are multifaceted and culturally contingent. In collectivist societies such as Pakistan, authoritarian practices may be normalized and reframed as protective or morally responsible (12,13). Behaviors that Western frameworks classify as restrictive may be perceived as expressions of care, complicating the interpretation of authoritarianism's psychological consequences. The positive association between authoritarianism and social intelligence in this sample may partly reflect measurement bias, where self-report scales capture external conformity and vigilance rather than deep emotional understanding. This highlights the importance of culturally adapting measures of parenting and social intelligence to improve construct validity.

Several strengths of the present study should be acknowledged. The focus on late adolescents reduced developmental variability, and the use of validated scales enabled the testing of multiple interrelated hypotheses. However, limitations remain. The relatively low Cronbach's alpha values for the parenting and social intelligence scales indicate modest reliability, likely reflecting cultural bias in the instruments. The exclusive reliance on self-report measures may also have introduced shared method variance. Moreover, the cross-sectional design precludes conclusions about causality. It is possible, for instance, that adolescents prone to MD influence parental responses or that higher social intelligence predisposes individuals toward fantasy activity rather than the reverse.

Future research should employ longitudinal and multi-informant designs to disentangle these relationships over time. Using culturally validated measures of parenting and social intelligence will be essential to strengthen construct validity. Qualitative or mixed-methods studies could also explore the thematic content and functions of adolescents' daydreams, distinguishing between adaptive imaginative rehearsal and maladaptive escapism. Finally, comparative cross-cultural research would clarify whether the unexpected positive associations between authoritarianism, social intelligence, and MD reflect unique features of collectivist societies or broader but underexplored developmental mechanisms.

In conclusion, this study provides novel insights into how parenting styles and social intelligence interact to shape MD among adolescents. While authoritative parenting exerts a protective influence, authoritarian practices may foster compensatory social-cognitive skills that inadvertently intensify maladaptive fantasy. These findings underscore the need for more nuanced theoretical models that account for cultural context and recognize the paradoxical ways in which seemingly adaptive traits can contribute to maladaptive outcomes.

CONCLUSION

This study demonstrated that parenting styles exert significant influence on adolescents' social intelligence and maladaptive daydreaming, with authoritative parenting emerging as a protective factor and authoritarian parenting showing a risk-enhancing role through both direct and mediated pathways. Unexpectedly, higher social intelligence was positively associated with maladaptive daydreaming, suggesting that cognitive and empathic strengths may paradoxically intensify immersive fantasy when coupled with restrictive or inconsistent parental environments. These findings highlight the importance of fostering balanced parenting practices that encourage autonomy, warmth, and structure to reduce maladaptive coping in adolescents. Clinically, the results emphasize the need for early screening of maladaptive daydreaming in school and community settings and the integration of parental counseling into adolescent mental health programs. From a research perspective, they underscore the necessity of culturally sensitive measurement tools and longitudinal designs to clarify causal directions and to refine interventions that address both familial and cognitive pathways in adolescent mental health.

REFERENCES

1. Darling N, Steinberg L. Parenting Style as Context: An Integrative Model. *Psychol Bull.* 1993;113(3):487–96.
2. Lansford JE. Parental Discipline and Physical Maltreatment in an International Sample: Prevalence, Cultural Norms, and Risk Factors. In: *Parenting Across Cultures*. New York: Psychology Press; 2009. p. 45–64.
3. Baumrind D. Effects of Authoritative Parental Control on Child Behavior. *Child Dev.* 1966;37(4):887–907.
4. Baumrind D. Child Care Practices Antecedent Three Patterns of Preschool Behavior. *Genet Psychol Monogr.* 1967;75(1):43–88.
5. Baumrind D. The Influence of Parenting Style on Adolescent Competence and Substance Use. *J Early Adolesc.* 1991;11(1):56–95.
6. Bigelsen J, Schupak C. Compulsive Fantasy: Proposed Evidence of an Under-Reported Systemic Behavior. *Conscious Cogn.* 2011;20(4):1634–48.
7. Bigelsen J, Schupak C. The Lived Experience of Maladaptive Daydreaming: An Interpretative Phenomenological Analysis. *Front Psychiatry.* 2021;12:652165.
8. Bornstein MH. Cultural Approaches to Parenting. *Parenting Sci Pract.* 2012;12(2–3):212–21.
9. Carlo G, Mestre MV, Samper P, Tur A, Armenta BE. The Longitudinal Relations Among Parenting, Sympathy, Prosocial Moral Reasoning, and Prosocial Behaviors. *Int J Behav Dev.* 2007;31(6):459–67.
10. Chao R. Beyond Parental Control and Authoritarian Parenting Style: Understanding Chinese Parenting Through the Cultural Notion of Training. *Child Dev.* 1994;65(4):1111–9.
11. Deci EL, Ryan RM. The “What” and “Why” of Goal Pursuits: Human Needs and the Self-Determination of Behavior. *Psychol Inq.* 2000;11(4):227–68.

12. Dereli E. Examining the Relationship Between Self-Esteem, Social Intelligence and Problem-Solving Skills of Children. *Soc Behav Pers Int J.* 2009;37(9):1181–91.
13. Dwairy M, Achoui M, Abouserie R, Farah A. Parenting Styles in Arab Societies: A First Cross-Regional Research Study. *J Cross Cult Psychol.* 2006;37(3):230–47.
14. Eisenberg N, Spinrad TL, Eggum ND. Emotion-Related Self-Regulation and Its Relation to Children's Maladjustment. *Annu Rev Clin Psychol.* 2005;1:495–525.
15. Garcia F, Aluja A. Parenting Styles and Parenting Practices: Reexamining the Relationship Between Authority and Social Functioning in Adolescents. *Child Adolesc Psychiatry Ment Health.* 2019;13:21.
16. Gini G, Pozzoli T, Borghi F, Franzoni L. The Role of Individual and Collective Moral Disengagement in Peer Aggression and Bystanding: A Multilevel Analysis. *J Abnorm Child Psychol.* 2011;39(5):713–23.
17. Goleman D. *Social Intelligence: The New Science of Human Relationships.* New York: Bantam Books; 2006.
18. Kuppens S, Ceulemans E. Parenting Styles: A Closer Look at a Well-Known Concept. *J Child Fam Stud.* 2019;28:168–81.
19. Lamborn SD, Mounts NS, Steinberg L, Dornbusch SM. Patterns of Competence and Adjustment Among Adolescents From Authoritative, Authoritarian, Indulgent, and Neglectful Families. *Child Dev.* 1991;62(5):1049–65.
20. Lamborn SD, Mounts NS, Steinberg L, Dornbusch SM. Patterns of Competence and Adjustment Among Adolescents From Authoritative, Authoritarian, Indulgent, and Neglectful Families. *Child Dev.* 2023;94(2):522–36.
21. Linden S, Arikian G, Somer E. Social-Cognitive Functioning in Individuals With Maladaptive Daydreaming. *J Clin Psychol.* 2023;79(2):323–44.
22. MacKinnon DP, Krull JL, Lockwood CM. Equivalence of the Mediation, Confounding and Suppression Effect. *Prev Sci.* 2000;1(4):173–81.
23. Martínez-Sánchez F, Silva C, Zacarés JJ. Boredom Proneness, Emotional Regulation and Maladaptive Daydreaming: A Path Analysis. *Curr Psychol.* 2020;39:1677–88.
24. McDonald S, Flanagan S, Rollins J, Kinch J. The Awareness of Social Inference Test (TASIT): A Clinical Test of Social Perception. *Arch Clin Neuropsychol.* 2006;21(7):555–67.
25. Mikulincer M, Shaver PR. *Attachment in Adulthood: Structure, Dynamics, and Change.* New York: Guilford Press; 2007.
26. Morris AS, Silk JS, Steinberg L, Myers SS, Robinson LR. The Role of the Family Context in the Development of Emotion Regulation. *Soc Dev.* 2007;16(2):361–88.
27. Morsch J. Maladaptive Daydreaming: A Qualitative Inquiry. *J Contemp Psychother.* 2002;32(2–3):197–212.
28. Pinquart M. Associations of Parenting Dimensions and Styles With Academic Achievement in Children and Adolescents: A Meta-Analysis. *Educ Psychol Rev.* 2017;29(3):436–58.
29. Pomerantz EM, Wang Q. The Role of Parenting in Children's Development. In: Bornstein MH, editor. *Handbook of Parenting.* Vol 1. New York: Lawrence Erlbaum Associates; 2009. p. 455–77.
30. Rohner RP. The Parental Acceptance-Rejection Syndrome: Universal Correlates of Perceived Rejection. *Am Psychol.* 2004;59(6):548–59.
31. Rudy D, Grusec JE. Authoritarian Parenting in Individualist and Collectivist Groups: Associations With Maternal Emotion and Cognition and Children's Self-Esteem. *J Fam Psychol.* 2006;20(1):68–78.
32. Ryan RM, Deci EL. Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. *Am Psychol.* 2000;55(1):68–78.
33. Silvera DH, Martinussen M, Dahl TI. The Tromsø Social Intelligence Scale: A Self-Report Measure of Social Intelligence. *Scand J Psychol.* 2001;42(4):313–9.
34. Somer E. Maladaptive Daydreaming: A Qualitative Report. *J Contemp Psychother.* 2002;32(2–3):197–212.
35. Somer E, Soffer-Dudek N, Ross CA. The Comorbidity of Daydreaming Disorder (Maladaptive Daydreaming). *J Nerv Ment Dis.* 2017;205(7):525–30.
36. Somer E, Soffer-Dudek N, Ross CA. Maladaptive Daydreaming: Proposed Diagnostic Criteria and Pilot Validation. *Conscious Cogn.* 2016;42:254–66.

37. Soffer-Dudek N, Somer E. Trapped in a Daydream: Daily Elevations in Maladaptive Daydreaming Are Associated With Daily Psychopathological Symptoms. *Front Psychiatry*. 2018;9:194.
38. Steinberg L. We Know Some Things: Parent–Adolescent Relationships in Retrospect and Prospect. *J Res Adolesc*. 2001;11(1):1–19.
39. Vygotsky LS. *Mind in Society: The Development of Higher Psychological Processes*. Cambridge: Harvard University Press; 1978.
40. Zsila A, McCutcheon LE, Demetrovics Z. The Association of Maladaptive Daydreaming With Problematic Internet Use and Psychological Dysfunction in a Community Sample. *Addict Behav Rep*. 2021;13:100339.
41. Andrews-Hanna JR, Smallwood J, Spreng RN. The Default Network and Self-Generated Thought: Component Processes, Dynamic Control, and Clinical Relevance. *Ann N Y Acad Sci*. 2014;1316(1):29–52.
42. Bandura A. *Social Learning Theory*. Englewood Cliffs: Prentice Hall; 1977.
43. Bowlby J. *A Secure Base: Parent-Child Attachment and Healthy Human Development*. London: Routledge; 1988.